



High-speed Positioning System

UPH Series



BOSCH

en Installation Manual

Table of Contents

1	Safety	5
1.1	Safety precautions	5
1.2	Important safety instructions	5
1.3	Important notices	8
1.4	FCC & ICES compliance	11
1.5	UL certification	12
1.6	Bosch notices	12
2	Unpacking	13
2.1	Description	13
2.2	Parts List	13
2.3	Tools Required	14
2.4	Safety Rules	14
3	Installing the Camera/Lens	15
3.1	Installing the Camera/Lens Mounting Tray	15
3.2	Connecting the Camera and Motorized Lens	17
4	Installing the High Speed Positioning System	18
4.1	Mounting the High Speed Positioning System	18
4.1.1	Wiring the Device	20
4.2	Wiring the Video Cable	21
4.3	Connecting the Power Supply	23
4.4	Wiring Biphase	25
4.5	RS-422/Pelco D	25
5	Connecting the Peripherals	26
5.1	Connecting to the Standard Base	26
5.2	Connecting to the IR360 Base	27
5.3	Fixing the Top Unit	28
5.4	IR360 Models (optional)	29
5.4.1	Fitting the Bracket	29
5.4.2	Assembling the Spotlights	30
5.4.3	Fitting the Spotlight on the Bracket	30
5.4.4	Infrared LED Spotlight Connections and Configurations	31
6	Configuring the Device	34
6.1	Pelco D Baud Rate	34
6.2	Protocol	35
6.3	Setting the Address	35
6.4	RS485 Line Termination	36
6.5	Biphase/Bilinx Termination	36
6.6	Connections	36

7	On-screen Display (OSD)	39
8	Configuring the System	40
8.1	Language Menu	40
8.2	Display Setup Menu	40
8.2.1	Area Parameters Menu	41
8.2.2	Changing the Edit Text Menu	43
8.2.3	Display Parameters	44
8.3	Motion Parameters Menu	45
8.3.1	Speed Menu	45
8.3.2	Limits	46
8.3.3	Preset/Patrol/Autopan	48
8.3.4	Wiper-Washer	53
8.3.5	Alarms	54
8.4	Camera/Infrared Parameters	55
8.4.1	Lens Modules Parameters and Area Masking	55
8.4.2	Infrared Parameters	56
8.4.3	Illuminator/Dinion Configuration	56
8.5	Load Default Configuration	57
8.6	Setup Info Menu	58
9	Keyboard Commands List - Bosch	59
9.1	Keyboard Commands List - Pelco	59
9.2	Changing the Settings	60
9.3	Changing the Numeric Fields	60
10	Maintenance	61
10.1	Cleaning	61
10.2	Replacing the Fuses	61
11	Troubleshooting	62
11.1	Low and High Temperatures	63
11.2	Dimensions and Range of Movement	64
12	Appendix A: Wiring Summary	66
13	Appendix B: Connecting the Pump	68
13.1	Connecting a Washer System in the HAC-WAS05-20	68

1 Safety

1.1 Safety precautions

**DANGER!**

High risk: This symbol indicates an imminently hazardous situation such as “Dangerous Voltage” inside the product.

If not avoided, this will result in an electrical shock, serious bodily injury, or death.

**WARNING!**

Medium risk: Indicates a potentially hazardous situation.

If not avoided, this could result in minor or moderate bodily injury.

**CAUTION!**

Low risk: Indicates a potentially hazardous situation.

If not avoided, this could result in property damage or risk of damage to the unit.

1.2 Important safety instructions

Read, follow, and retain for future reference all of the following safety instructions. Heed all warnings on the unit and in the operating instructions before operating the unit.

1. **Cleaning** - Unplug the unit from the outlet before cleaning. Follow any instructions provided with the unit. Generally, using a dry cloth for cleaning is sufficient but a moist, fluff-free cloth or leather shammy may also be used. Do not use liquid cleaners or aerosol cleaners.
2. **Heat Sources** - Do not install the unit near any heat sources such as radiators, heaters, stoves, or other equipment (including amplifiers) that produce heat.
3. **Ventilation** - Any openings in the unit enclosure are provided for ventilation to prevent overheating and ensure reliable operation. Do not block or cover these openings. Do not place the unit in an enclosure unless proper ventilation is provided, or the manufacturer's instructions have been adhered to.
4. **Object and liquid entry** - Never push objects of any kind into this unit through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electrical shock. Never spill liquid of any kind on the unit. Do not place objects filled with liquids, such as vases or cups, on the unit.
5. **Controls adjustment** - Adjust only those controls specified in the operating instructions. Improper adjustment of other controls may cause damage to the unit. Use of controls or adjustments, or performance of procedures other than those specified, may result in hazardous radiation exposure.
6. **Overloading** - Do not overload outlets and extension cords. This can cause fire or electrical shock.

7. **Power sources** - Operate the unit only from the type of power source indicated on the label. Before proceeding, be sure to disconnect the power from the cable to be installed into the unit.
 - For battery powered units, refer to the operating instructions.
 - For external power supplied units, use only the recommended or approved power supplies.
 - For limited power source units, this power source must comply with *EN60950*. Substitutions may damage the unit or cause fire or shock.
 - For 24 VAC units, voltage applied to the unit's power input should not exceed $\pm 10\%$, or 28 VAC. User-supplied wiring must comply with local electrical codes (Class 2 power levels). Do not ground the supply at the terminals or at the unit's power supply terminals.
 - If unsure of the type of power supply to use, contact your dealer or local power company.

NOTICE!


Installation category (also called Overvoltage Category) specifies the level of mains voltage surges that the equipment will be subjected to. The category depends upon the location of the equipment, and on any external surge protection provided. Equipment in an industrial environment, directly connected to major feeders/short branch circuits, is subjected to Installation Category III. If this is the case, a reduction to Installation Category II is required. This can be achieved by use of an isolating transformer with an earthed screen between primary and secondary, or by fitting listed Surge Protective Devices (SPDs) from live to neutral and from neutral to earth. Listed SPDs shall be designed for repeated limiting of transient voltage surges, suitable rated for operating voltage and designated as follows:

- Type 2 (Permanently connected SPDs intended for installation on the load side of the service equipment overcurrent device)
- Nominal Discharge Current (I_n) 20 kA min.

For example: FERRAZ SHAWMUT, STT2240SPG-CN, STT2BL240SPG-CN rated 120/240 VAC, ($I_n=20$ kA)

8. **Servicing** - Do not attempt to service this unit yourself. Opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
9. **Damage requiring service** - Unplug the unit from the main AC power source and refer servicing to qualified service personnel when any damage to the equipment has occurred, such as:
 - the power supply cord or plug is damaged;
 - exposure to moisture, water, and/or inclement weather (rain, snow, etc.);
 - liquid has been spilled in or on the equipment;
 - an object has fallen into the unit;
 - unit has been dropped or the unit cabinet is damaged;
 - unit exhibits a distinct change in performance;
 - unit does not operate normally when the user correctly follows the operating instructions.
10. **Replacement parts** - Be sure the service technician uses replacement parts specified by the manufacturer, or that have the same characteristics as the original parts. Unauthorized substitutions may cause fire, electrical shock, or other hazards.
11. **Safety check** - Safety checks should be performed upon completion of service or repairs to the unit to ensure proper operating condition.

-
12. **Installation** - Install in accordance with the manufacturer's instructions and in accordance with applicable local codes.
-

**NOTICE!**

This product must only be used with a UR marked camera, rated 6-12 VDC with a maximum power consumption of 5 W and a flammability class V-0 and Product Category NWGQ2,8.

13. **Attachments, changes or modifications** - Only use attachments/accessories specified by the manufacturer. Any change or modification of the equipment, not expressly approved by Bosch, could void the warranty or, in the case of an authorization agreement, authority to operate the equipment.

1.3

Important notices



Accessories - Do not place this unit on an unstable stand, tripod, bracket, or mount. The unit may fall, causing serious injury and/or serious damage to the unit. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer. When a cart is used, use caution and care when moving the cart/apparatus combination to avoid injury from tip-over. Quick stops, excessive force, or uneven surfaces may cause the cart/unit combination to overturn. Mount the unit per the manufacturer's instructions.

All-pole power switch - Incorporate an all-pole listed circuit breaker, with a contact separation of at least 20A, 3 mm (400 V not essential) in each pole, into the electrical installation of the building. If it is needed to open the housing for servicing and/or other activities, use this all-pole switch as the main disconnect device for switching off the voltage to the unit.

**WARNING!**

For the standard models with 120/230 VAC power, an external junction box with a readily accessible 2-pole disconnect device must be incorporated. For the IR model UPH-H-WDIR-24, the 24 VAC power must be provided by a UL listed power supply with a double insulation transformer.

Camera grounding - For mounting the camera in potentially damp environments, ensure to ground the system using the ground connection of the power supply connector (see section: Connecting external power supply).

Camera lens - An assembled camera lens in the outdoor housing must comply and be tested in accordance with *UL/IEC60950*. Any output or signal lines from the camera must be SELV or Limited Power Source. For safety reasons the environmental specification of the camera lens assembly must be within the environmental specification of -10 °C (14 °F) to 50 °C (122 °F).

Camera signal - Protect the cable with a primary protector if the camera signal is beyond 140 feet, in accordance with *NEC800 (CEC Section 60)*.

Coax grounding:

- Ground the cable system if connecting an outside cable system to the unit.
- Connect outdoor equipment to the unit's inputs only after this unit has had its grounding plug connected to a grounded outlet or its ground terminal is properly connected to a ground source.
- Disconnect the unit's input connectors from outdoor equipment before disconnecting the grounding plug or grounding terminal.
- Follow proper safety precautions such as grounding for any outdoor device connected to this unit.

U.S.A. models only - *Section 810 of the National Electrical Code, ANSI/NFPA No.70*, provides information regarding proper grounding of the mount and supporting structure, grounding of the coax to a discharge unit, size of grounding conductors, location of discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.



Disposal - Your Bosch product was developed and manufactured with high-quality material and components that can be recycled and reused. This symbol means that electronic and electrical appliances, which have reached the end of their working life, must be collected and disposed of separately from household waste material. Separate collecting systems are usually in place for disused electronic and electrical products. Please dispose of these units at an environmentally compatible recycling facility, per *European Directive 2002/96/EC*.

Electronic Surveillance - This device is intended for use in public areas only. U.S. federal law strictly prohibits surreptitious recording of oral communications.

Environmental statement - Bosch has a strong commitment towards the environment. This unit has been designed to respect the environment as much as possible.

Electrostatic-sensitive device - Use proper CMOS/MOS-FET handling precautions to avoid electrostatic discharge.

NOTE: Wear required grounded wrist straps and observe proper ESD safety precautions when handling the electrostatic-sensitive printed circuit boards.

Fuse rating - For protection of the device, the branch circuit protection must be secured with a maximum fuse rating as indicated in the manual. This must be in accordance with *NEC800 (CEC Section 60)*.



CAUTION!

For continued protection against risk of fire, replace, only with same type and rating of fuse.

Grounding and polarization - This unit may be equipped with a polarized alternating current line plug (a plug with one blade wider than the other blade). This safety feature allows the plug to fit into the power outlet in only one way. If unable to insert the plug fully into the outlet, contact a locally certified electrician to replace the obsolete outlet. Do not defeat the safety purpose of the polarized plug.

Alternately, this unit may be equipped with a 3-pole grounding plug (a plug with a third pin for earth grounding). This safety feature allows the plug to fit into a grounded power outlet only. If unable to insert the plug into the outlet, contact a locally certified electrician to replace the obsolete outlet. Do not defeat the safety purpose of the grounding plug.



CAUTION!

The separate protective earthing terminal provided on this product shall be permanently connected to earth.

Moving - Disconnect the power before moving the unit. Move the unit with care. Excessive force or shock may damage the unit and the hard disk drives.

Outdoor signals - The installation for outdoor signals, especially regarding clearance from power and lightning conductors and transient protection, must be in accordance with *NEC725* and *NEC800 (CEC Rule 16-224 and CEC Section 60)*.

Permanently connected equipment - Incorporate a readily accessible disconnect device external to the equipment.

Power resupply - If the unit is forced to power down due to exceeding the specified operating temperatures, disconnect the power cord, wait for at least 30 seconds, and then reconnect the power cord.

Power lines - Do not locate the camera near overhead power lines, power circuits, or electrical lights, nor where it may contact such power lines, circuits, or lights.

System ground/Safety ground

System (video) ground is indicated by the symbol .

Safety (power) ground is indicated by the symbol .

The system ground is only used to comply with safety standards or installation practices in certain countries. Bosch does **not** recommend connecting system ground to safety ground unless it is explicitly required. However, if the system ground and safety ground are connected and grounding loops are causing interference in the video signal, use an isolation transformer (available separately from Bosch).

**CAUTION!**

The separate protective earthing terminal provided on this product shall be permanently connected to earth.

**CAUTION!**

Connecting System ground to Safety ground may result in ground loops that can disrupt the CCTV system.

Video loss - Video loss is inherent to digital video recording; therefore, Bosch Security Systems cannot be held liable for any damage that results from missing video information. To minimize the risk of lost digital information, Bosch Security Systems recommends multiple, redundant recording systems, and a procedure to back up all analog and digital information.

1.4 FCC & ICES compliance

FCC Information

(U.S.A. and Canadian Models Only)

This device complies with *part 15* of the *FCC Rules*. Operation is subject to the following conditions:

- this device may not cause harmful interference, and
- this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a **Class A** digital device, pursuant to *Part 15* of the *FCC Rules* and *ICES-003* of *Industry Canada*. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a **commercial environment**. This equipment generates, uses, and radiates radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his expense.

Intentional or unintentional modifications, not expressly approved by the party responsible for compliance, shall not be made. Any such modifications could void the user's authority to operate the equipment. If necessary, the user should consult the dealer or an experienced radio/television technician for corrective action.

The user may find the following booklet, prepared by the Federal Communications Commission, helpful: *How to Identify and Resolve Radio-TV Interference Problems*. This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00345-4.

Informations FCC et ICES

(modèles utilisés aux États-Unis et au Canada uniquement)

Ce produit est conforme aux normes *FCC partie 15*. la mise en service est soumise aux deux conditions suivantes :

- cet appareil ne peut pas provoquer d'interférence nuisible et
- cet appareil doit pouvoir tolérer toutes les interférences auxquelles il est soumis, y compris les interférences qui pourraient influencer sur son bon fonctionnement.

AVERTISSEMENT: Suite à différents tests, cet appareil s'est révélé conforme aux exigences imposées aux appareils numériques de **Classe A** en vertu de la *section 15 du règlement* de la *Commission fédérale des communications des États-Unis (FCC)*. Ces contraintes sont destinées à fournir une protection raisonnable contre les interférences nuisibles quand l'appareil est utilisé dans une **installation commerciale**. Cette appareil génère, utilise et émet de l'énergie de fréquence radio, et peut, en cas d'installation ou d'utilisation non conforme aux instructions, générer des interférences nuisibles aux communications radio. L'utilisation de ce produit dans une zone résidentielle peut provoquer des interférences nuisibles. Le cas échéant, l'utilisateur devra remédier à ces interférences à ses propres frais.

Au besoin, l'utilisateur consultera son revendeur ou un technicien qualifié en radio/télévision, qui procédera à une opération corrective. La brochure suivante, publiée par la Commission fédérale des communications (FCC), peut s'avérer utile : *How to Identify and Resolve Radio-TV Interference Problems* (Comment identifier et résoudre les problèmes d'interférences de radio et de télévision). Cette brochure est disponible auprès du U.S. Government Printing Office, Washington, DC 20402, États-Unis, sous la référence n° 004-000-00345-4.

**NOTICE!**

This is a class A product. In a domestic environment this product may cause radio interference, in which case the user may be required to take adequate measures.

1.5

UL certification

Disclaimer

Underwriter Laboratories Inc. ("UL") has not tested the performance or reliability of the security or signaling aspects of this product. UL has only tested fire, shock and/or casualty hazards as outlined in UL's *Standard(s) for Safety for Closed Circuit Television Equipment, UL 2044*. UL Certification does not cover the performance or reliability of the security or signaling aspects of this product.

UL MAKES NO REPRESENTATIONS, WARRANTIES, OR CERTIFICATIONS WHATSOEVER REGARDING THE PERFORMANCE OR RELIABILITY OF ANY SECURITY OR SIGNALING RELATED FUNCTIONS OF THIS PRODUCT.

Disclaimer

Underwriter Laboratories Inc. ("UL") has not tested the performance or reliability of the security or signaling aspects of this product. UL has only tested fire, shock and/or casualty hazards as outlined in UL's *Standard(s) for Safety for Information Technology Equipment, UL 60950-1*. UL Certification does not cover the performance or reliability of the security or signaling aspects of this product.

UL MAKES NO REPRESENTATIONS, WARRANTIES, OR CERTIFICATIONS WHATSOEVER REGARDING THE PERFORMANCE OR RELIABILITY OF ANY SECURITY OR SIGNALING-RELATED FUNCTIONS OF THIS PRODUCT.

1.6

Bosch notices

Copyright

This manual is the intellectual property of Bosch Security Systems and is protected by copyright. All rights reserved.

Trademarks

All hardware and software product names used in this document are likely to be registered trademarks and must be treated accordingly.

NOTE:

This manual has been compiled with great care and the information it contains has been thoroughly verified. The text was complete and correct at the time of printing. The ongoing development of the products may mean that the content of the user guide can change without notice. Bosch Security Systems accepts no liability for damage resulting directly or indirectly from faults, incompleteness or discrepancies between the user guide and the product described.

More information

For more information please contact the nearest Bosch Security Systems location or visit www.boschsecurity.com

2 Unpacking

This equipment should be unpacked and handled with care. If an item appears to have been damaged in shipment, notify the shipper immediately.

Verify that all the parts listed in *Section 2.2 Parts List, page 13* are included. If any items are missing, notify your Bosch Security Systems Sales or Customer Service Representative.

The original packing carton is the safest container in which to transport the unit and must be used if returning the unit for service. Save it for possible future use.

2.1 Description

The Bosch High-Speed Positioning System is a complete, high-performance, high quality solution that can pan 360 degrees continuously at speeds of up to 100 degrees per second. An extensive range of options lets you tailor the system to your specific requirements. For example, a wide variety of video cameras and lenses, including the optimized Dinion 2X camera and zoom lens combinations, are available.

2.2 Parts List

The High Speed Positioning System includes the following components:

- One (1) Unitized Pan Head (UPH) device
- One (1) Camera/Lens Mounting Tray
- The following Accessory Bags
 - Cable and Screws:
 - One (1) coaxial termination cable
 - One (1) coaxial cable
 - Four (4) M4 x 10 mm screws; for tray mounting
 - Four (4) 4 mm washers; for tray mounting
 - Two (2) tie wraps, 102 x 2.5 mm
 - One (1) tie wrap, 180 x 3.5 mm
 - Power Connection:
 - One (1) 3 mm Allen wrench
 - Two (2) tie wraps, 102 x 2.5 mm
 - One (1) plastic tube (power wiring cover)
 - Two (2) conduit plugs for cable glands
 - One (1) safety label
 - Desiccant:
 - One (1) desiccant bag
 - One (1) mounting plate
 - Two (2) M4 x 10 mm screws self-tapping, galvanized (Zn)
 - One (1) 4 mm Allen wrench
 - One (1) instruction manual
- One (1) box containing:
 - One (1) PTZ base with power supply and one (1) desiccant bag
 - Four (4) inox M5 x 20 mm screws, hexagonal head;
 - Four (4) washers/gaskets (2015 O-ring)
- IR bracket with four (4) inox M5 x 14 mm screws, hexagonal head; four (4) M5 lock washers UNI 1751; IR model only

2.3 Tools Required

- Small, straight-blade screwdriver - 2.5 mm (0.1 in.)

2.4 Safety Rules

**WARNING!**

Installation and maintenance must be performed by skilled personnel only.

**WARNING!**

The building installation must include a 20A max. Branch Circuit Protection.

To ensure safety, the following warnings are specified:

- The device must be installed and maintained by skilled technical personnel.
- Connect the device to a power source corresponding to the indications given on the marking label.
- The device has been designed for permanent installation in a building or other suitable structure.
- Moving parts may result in risk of injury, therefore, the device should be mounted so that it is accessible only to the technician/installer.
- Place the safety warning label near the UPH.
- Before carrying out any technical work on the UPH, tilt the UPH all the way up or all the way down, then disconnect the power supply and cables from all other devices.
- Do not use power cables with signs of wear or aging.
- Do not use the device in the presence of inflammable substances.
- Do not allow children or unauthorized personnel to use the device.
- The device should be switched **OFF** when the power supply has been disconnected and the connecting cables to other devices have been removed.
- Keep this manual for future reference.

**CAUTION!**

Before disconnecting the power supply to the UPH, tilt the device either all the way up or all the way down. When the UPH loses power, depending on how it is positioned, the unit may drop slightly forward or backward. Therefore, failure in correctly positioning the UPH before disconnecting the power supply may result in personal injury or possible damage to the device.

3 Installing the Camera/Lens

This chapter outlines the procedures needed to install the camera/lens inside the UPH housing. Installation should be done only by qualified service personnel in conformance to all local codes.

Note: For models that already have the camera/lens installed, go to *Section 4 Installing the High Speed Positioning System*.



NOTICE!

This product must only be used with a UR marked camera, rated 6-12 VDC with a maximum power consumption of 5 W and a flammability class V-0 and Product Category NWGQ2,8.

3.1 Installing the Camera/Lens Mounting Tray

For some models of the High Speed Positioning System, the customer is responsible for installing the camera and lenses.

To install the camera, proceed as follows:

1. Open the housing by loosening the captive screws on the side and swivel the upper body until it is completely open (do not remove screws completely).

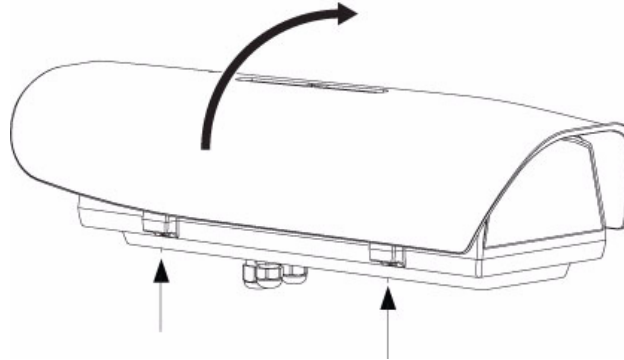


Figure 3.1 Loosen Screws and Open Lid of Housing

2. Remove the camera/lens mounting tray from the packing box.
3. Install the camera/lens mounting tray attached in the correct position inside the housing at the location shown below.

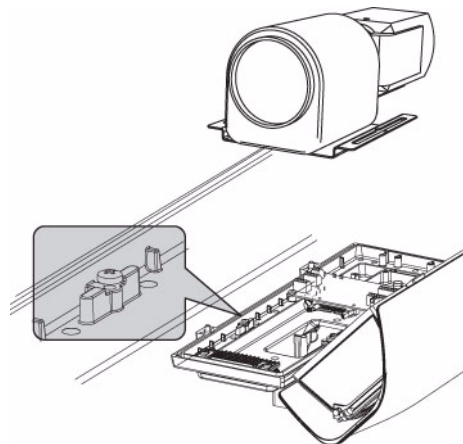


Figure 3.2 Install Camera/Tray

4. Reposition the camera/lens mounting tray sliding it forward so the lens is as close to the front window as possible. Insert and tighten the four M4 x 10 screws and the four washers (contained in the Cable and Screws accessory bag) as shown in *Figure 3.3*.

**NOTICE!**

A partially blocked view may result if the camera is not pushed up close to the front of the housing.

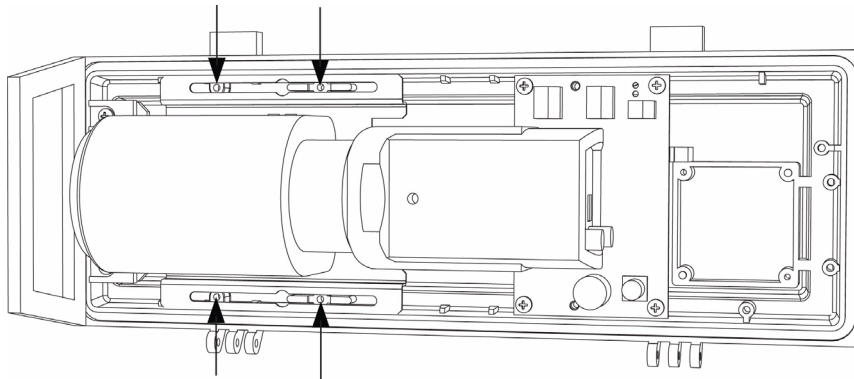


Figure 3.3 Attach Camera to Housing

5. Locate the sealed plastic bag containing the desiccant bag.
6. Place the desiccant bag inside the housing as shown in *Figure 3.4*, with the desiccant bag secured into position by the metal fixing accessory and two fixing screws (supplied in the Desiccant accessory bag).

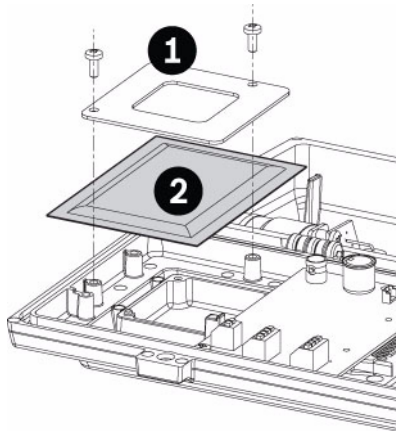


Figure 3.4 Attach Desiccant Bag

Reference #	Description
1	Bracket
2	Desiccant Bag

7. Remove the camera packaging material.
8. Make sure the gasket is present and in good condition.

3.2 Connecting the Camera and Motorized Lens

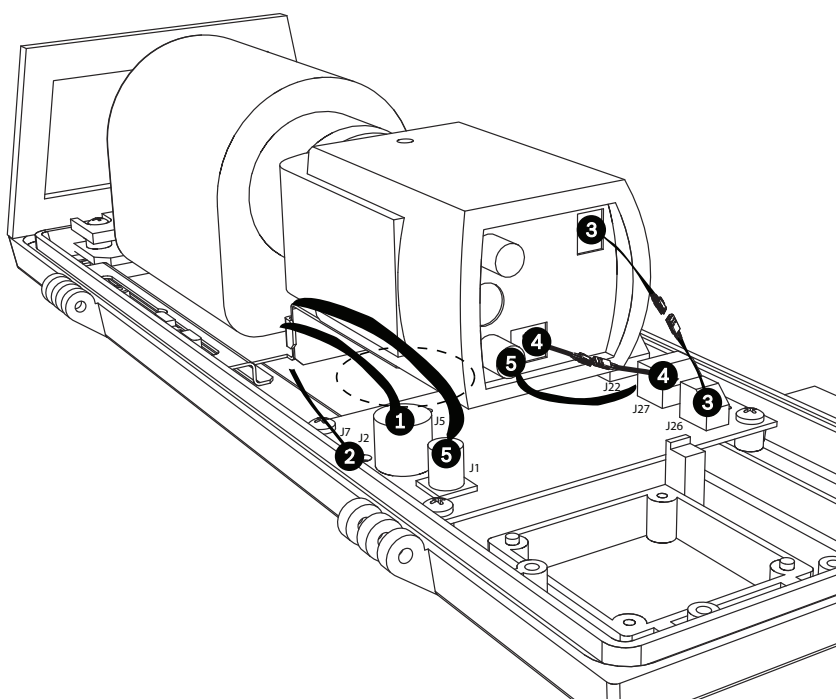


Figure 3.5 Make Connections (LTC 0498 Dinion 2X camera shown)

Reference	Description
1	8-pin DIN connector
2	4-pin iris override connector
3	2-pin power cable
4	4-pin alarm cable
5	VIDEO IN connector

1. Connect the 8-pin DIN connector zoom and focus control cable from the camera to the J5 location on the board. Secure cable in up-right position by using supplied tie wrap.
2. If applicable (LTC 3293/30 manual override units only), connect the 4-pin iris override connector from the camera to the J2 location on the board.
3. Connect the 2-pin power cable from the camera to the mating connector from the J26 location on the board.
4. Connect the 4-pin alarm cable from the camera to the mating connector from the J27 location on the board.
5. Connect the “L” adapter end of the coax cable (supplied in the Cable and Screw accessory bag) to the coax connector on the back of the camera. VIDEO IN connector from the camera to the J1 location on the board.
6. Route the other end of the coax cable along the right side (looking from behind) of the camera and under the camera tray. Then, connect the coax cable to the J1 location on the board.
7. Wrap one of the 102 x 2.5 mm tie wraps around the zoom and focus cable and the coax cable, near the location where the cables connect to the board.
8. Close and secure the housing lid.

4 Installing the High Speed Positioning System

This chapter outlines the procedures needed to mount the High Speed Positioning System. Installation should be done only by qualified service personnel in conformance to all local codes.



NOTICE!

The High-speed Positioning System unit cannot be mounted upside down! This configuration stresses bearings and mechanical components; no liabilities are accepted and all warranties are void.



NOTICE!

In accordance with NEC laws, you may be required to install an external power junction box.

4.1 Mounting the High Speed Positioning System

The High Speed Positioning System can be mounted with either a wall mount (MTC-WUPH, sold separately) or a pole mount (MTC-PUPH, sold separately).

To install the device, proceed as follows:

1. Determine the location to install the device.
 - When selecting a location, a minimum clearance of 300 mm (12 in.) in front of the unit and 300 mm (12 in.) in back of the unit is required to facilitate component removal and installation.
 - The device should be installed vertically. Any other position could impair the performance of the device.
 - Do not attach the device upside down.
2. Insert the cables into the optional wall or pole mount so they protrude approximately 0.5 m (19.7 in.).

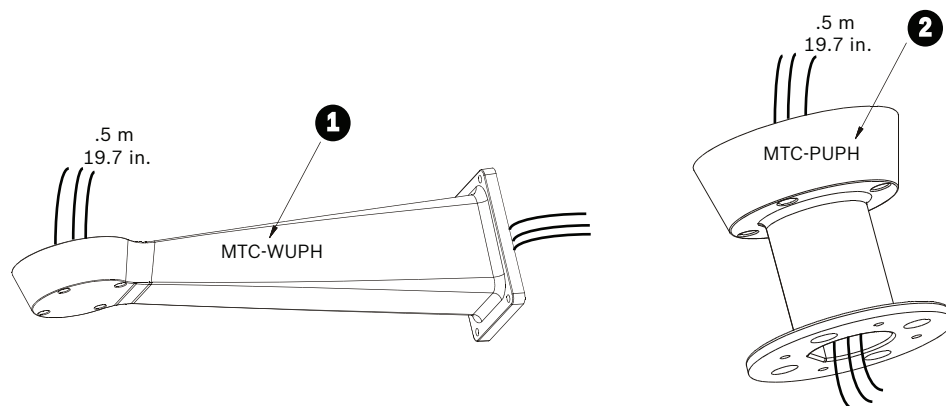


Figure 4.1 Optional Wall Mount (1) or Pole Mount (2)



WARNING!

The cables should not be accessible by unauthorized personnel; cables should be secured to fixed locations at appropriate intervals to bare the weight of the cables, for example, cables running inside a tall camera pole.

**WARNING!**

Be sure to use appropriately strong and load bearing bolts and other fixing materials when installing any UPH mountings to any surface.

When the MTC-WUPH Wall Mount is fixed to a wall, each fixing dowel must be able to support a traction load of 300 dN or more. It is necessary to use 8 mm (0.315 in.) diameter bolts with appropriate length. Ensure the clamping system is able to support at least four times the weight of the entire equipment, including swinging, lenses, and camera.

3. Attach the optional wall or pole mount according to the specific mounting manual.

Part	Description
MTC-PUPH	Outdoor Pole Mount for UPH Series
MTC-WUPH	Outdoor Wall Mount for UPH Series
MTC-POLE-W	Pole Adapter for MTC-WUPH
MTC-CORN-W	Corner Adapter for MTC-WUPH

Note: If using a washer kit, the spray support should be installed before positioning and wiring the pan/tilt.

**WARNING!**

Take special care when attaching and fastening down the apparatus. If the mount is to be attached to a concrete surface you must use dowel pins with a traction torque rating of at least 300 dN each.

For a metal surface, use screws with a diameter of at least 8 mm of an appropriate length. The clamping system must be support at least four times the weight of the entire equipment, including swinging, lenses, and camera.

4. Remove desiccant bag from inside the base and dispose.
5. Remove the cable glands from the base and fit the gasket / seal ring.
6. Insert the cables into the cable glands while holding the base approximately 20 cm from the bracket. Note that there are three glands; one for power, one for video, and one for data / IO cables.

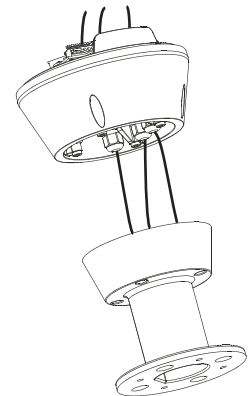
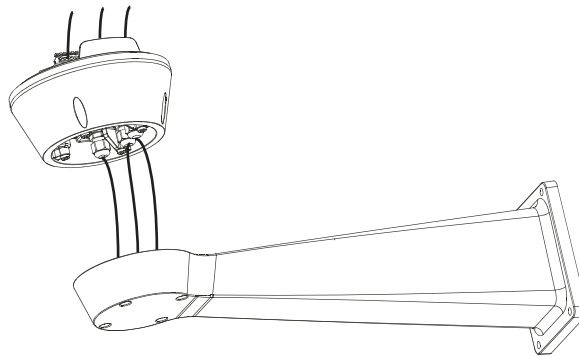


Figure 4.2 Inserting the Cables through the Cable Glands

7. Securely lock the cable glands into place (gland closing torque 5 Nm); they accept cables 5-10 mm (0.2-0.39 in.) in diameter. The gland closing torque is 5 Nm; use a calibrated torque wrench to ensure closure.

Note: The cable glands can be changed to accept smaller 3-7 mm diameter cables by using the two (2) conduit plugs provided.

8. Position the base on the optional wall or pole mount, guiding the cables so that they are positioned inside the wall or pole mount (see *Figure 4.3*).

- 9. Fasten the base to the wall or pole mount with the supplied screws and washers (use a calibrated torque wrench setting of 2.1 Nm).

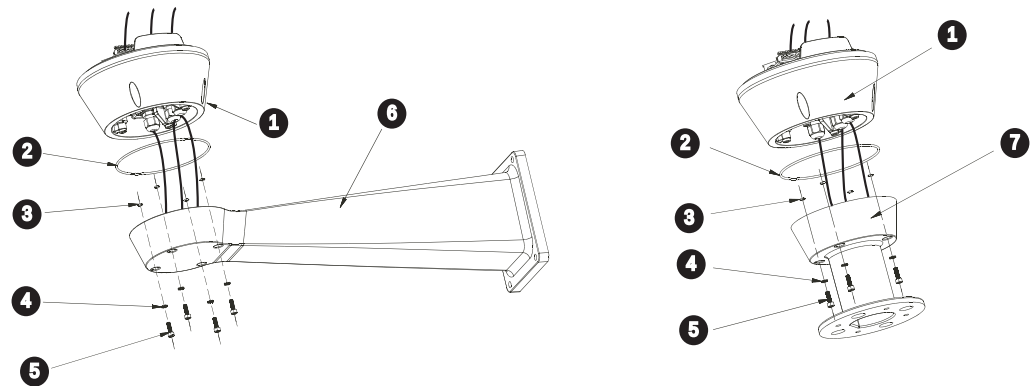


Figure 4.3 Schematic Diagram

Reference	Description
1	Base
2	Gasket
3	Screw Ring
4	Washer
5	Screw
6	Bracket
7	Support

4.1.1 Wiring the Device



WARNING!
The Installation is TNV-1 do not connect it to SELV circuits.



WARNING!
The installation is type CDS (Cable Distribution System), do not connect it to SELV circuits.
To reduce risk of fire use only 26 AWG or larger line cord.

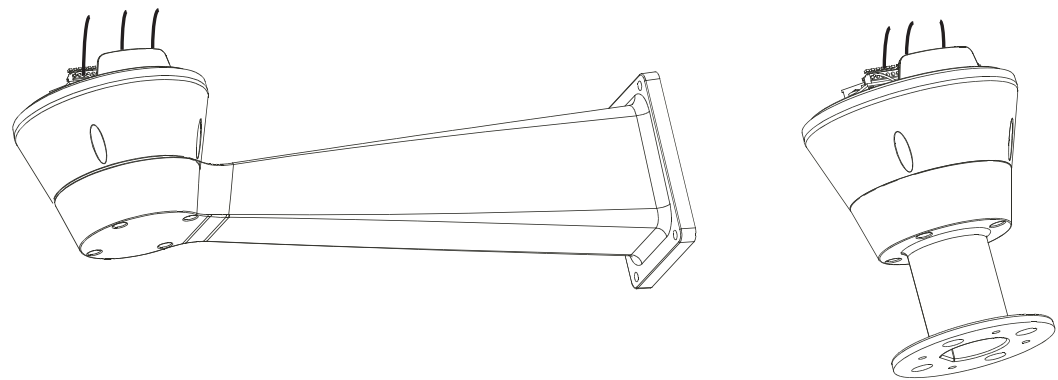


Figure 4.4 Preparing the Cables for Wiring

1. Cut the cables to approximately 152.4 mm (6 in.) (see *Figure 4.4*). The earth cable must be longer than the power wires by approximately 10 mm or more to prevent disconnection.
2. Cover the power cable with the plastic tube provided and fix it with the tie thread.
3. Make a group with all signal cables and fix them with the tie thread. See the illustration below for a proper cable connection.

Note: IR360 version boards will vary slightly due to the signals connector having 16 lines as compared to 19 as shown below.

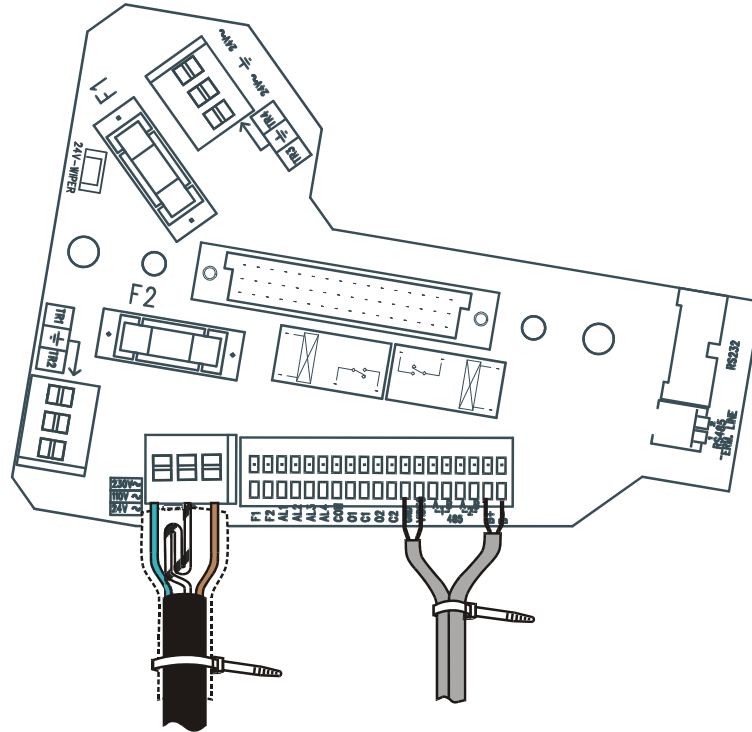


Figure 4.5 Tie Threads used to Group and Secure Cables

4.2 Wiring the Video Cable



WARNING!

The Installation is TNV-1 do not connect it to SELV circuits.



WARNING!

The installation is type CDS (Cable Distribution System), do not connect it to SELV circuits. To reduce risk of fire use only 26 AWG or larger line cord.

To wire the video cable, proceed as follows:

1. Locate the coaxial termination cable that is in the Cable and Screws accessory bag.
2. Use a small screwdriver to press down on the GND push latch (see *Figure 4.6*) and attach the black ground wire to the GND terminal.
3. Use a small screwdriver to press down on the VIDEO push latch (see *Figure 4.6*) and attach the clear coaxial conductor to the VIDEO terminal.
4. Retract the shield covering the female BNC connector and route the coaxial termination cable into the base of the unit.

5. Route the incoming coaxial cable with a male BNC connector into the base and connect to the female BNC connector on the coaxial termination cable.
6. Move the shield to cover the coaxial connection.

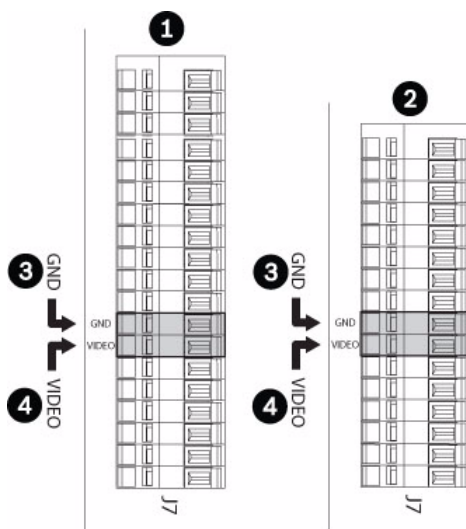


Figure 4.6 Wiring the Terminals

Reference	Description
1	Standard - 19 pin
2	IR - 16 pin
3	GND
4	Video

Note: The above terminals support AWG 20 (0.5 mm²) to AWG 28 (0.08 mm²) cables.



WARNING!

The installation is type CDS (Cable Distribution System), do not connect it to SELV circuits. To reduce risk of fire use only 26 AWG or larger line cord.

4.3 Connecting the Power Supply

**CAUTION!**

The separate protective earthing terminal provided on this product shall be permanently connected to earth.

**NOTICE!**

Installation category (also called Overvoltage Category) specifies the level of mains voltage surges that the equipment will be subjected to. The category depends upon the location of the equipment, and on any external surge protection provided. Equipment in an industrial environment, directly connected to major feeders/short branch circuits, is subjected to Installation Category III. If this is the case, a reduction to Installation Category II is required. This can be achieved by use of an isolating transformer with an earthed screen between primary and secondary, or by fitting listed Surge Protective Devices (SPDs) from live to neutral and from neutral to earth. Listed SPDs shall be designed for repeated limiting of transient voltage surges, suitable rated for operating voltage and designated as follows:

- Type 2 (Permanently connected SPDs intended for installation on the load side of the service equipment overcurrent device)
- Nominal Discharge Current (I_n) 20 kA min.

For example: FERRAZ SHAWMUT, STT2240SPG-CN, STT2BL240SPG-CN rated 120/240 VAC, ($I_n=20$ kA)

The base with power supply box is available in three (3) power supply voltages (24 VAC, 120 VAC, or 230 VAC). Before proceeding with the installation, check the identification label of the product to verify that the device coincides with the power supply requirements.

**CAUTION!**

When connecting the base, make sure the external power source is disconnected (the disconnecting switch is open).

When the base is opened, the power supply board appears as shown below. To connect the power supply, make the connections as seen in *Figure 4.7*.

**WARNING!**

For 24 VAC units intended for UL markets, use only a Class 2 UL listed power supply for all models except the UPH-H-WDIR-24 (compliant with the local electrical codes). For UPH-H-WDIR-24, the power must be provided by a UL listed power supply with a double insulation transformer.

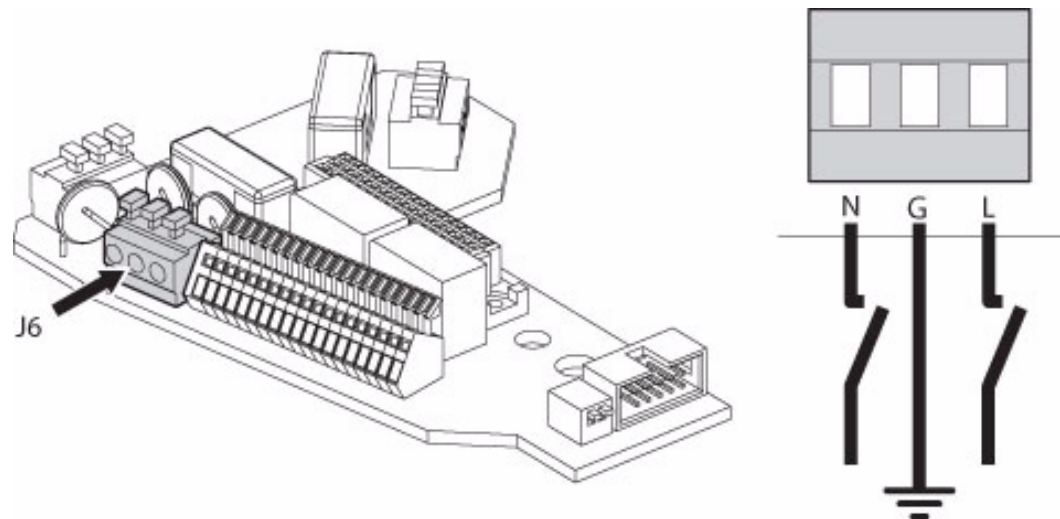


Figure 4.7 Power Supply Connections

To wire the power cable (not supplied), use the tables below to attach the appropriate colored wire to the appropriate terminal.

Wire Color	Reference	24 VAC ¹ Terminal Connection
Per local Installer	N	Neutral
Per local Installer	L	Live/Active
Green/Yellow	G	Earth

1. For 24 VAC units intended for UL markets, use only a Class 2 UL listed power supply for all models except the UPH-H-WDIR-24 (compliant with the local electrical codes). For UPH-H-WDIR-24, the power must be provided by a UL listed power supply with a double insulation transformer.

Wire Color	120 / 230 VAC ² Terminal Connection
Blue	Neutral
Brown	Live/Active
Green/Yellow	Earth

2. Use the appropriate junction box to connect the power supply line. Use a Class 2, UL listed power supply



WARNING!

For the standard models with 120/230 VAC power, an external junction box with a readily accessible 2-pole disconnect device must be incorporated. For the IR model UPH-H-WDIR-24, the 24 VAC power must be provided by a UL listed power supply with a double insulation transformer.

Note: The power cable must be double insulated, each separate cable is individually insulated, then contained in an outer insulated cover. The cable type must be chosen in accordance with local and national wiring rules.



WARNING!

The device must be wired by skilled technical personnel. Never make any changes or connections that are not described in this handbook. Failure to follow the instructions indicated in this manual may result in system or safety hazards, thus invalidating the guarantee.



WARNING!

When wiring for external/outdoor environments, be sure to use appropriately rated cables.

4.4 Wiring Biphase



WARNING!

The Installation is TNV-1 do not connect it to SELV circuits.



WARNING!

The installation is type CDS (Cable Distribution System), do not connect it to SELV circuits. In order to reduce the risk of fire, only use UL Listed or CSA certified telecommunication line cord sizes greater than or equal to 26AWG.

To wire for Biphase, connect the C+ terminal wire to the B+ terminal and the C- terminal wire to the B- terminal respectively.

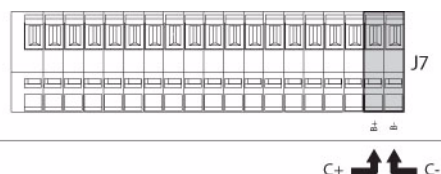


Figure 4.8 Wiring for Biphase

4.5 RS-422/Pelco D



WARNING!

The Installation is TNV-1 do not connect it to SELV circuits.



WARNING!

The installation is type CDS (Cable Distribution System), do not connect it to SELV circuits. In order to reduce the risk of fire, only use UL Listed or CSA certified telecommunication line cord sizes greater than or equal to 26AWG.

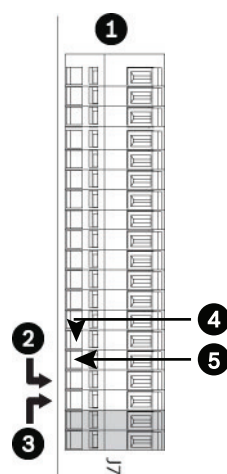


Figure 4.9 Connecting for RS-422

Reference	Description
1	Pelco D connections
2	RS485-2 A, connect to Pelco controller out Tx +
3	RS485-2 B, connect to Pelco controller out Tx -
4	RS485-1 A, connect to Pelco controller input Rx +
5	RS485-1 B, connect to Pelco controller input Rx -

In order to change the Baud Rate, the 4-way dip switch must be used. Refer to *Section 6.1 Pelco D Baud Rate*.

5Connecting the Peripherals

Use the following illustrations to connect the peripherals to the standard system and the IR360 bases.

5.1Connecting to the Standard Base

The standard base has a 19-pin connector for which the following connections are illustrated:

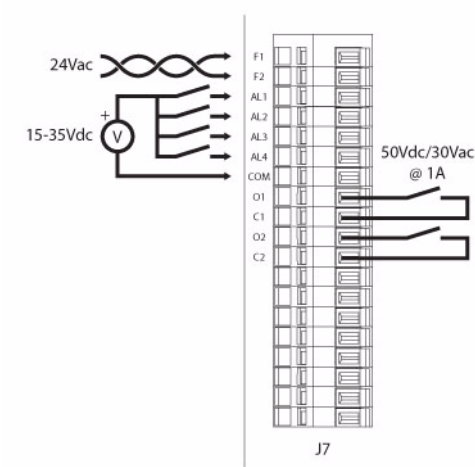


Figure 5.1 Base with 19-pin Connector for Connecting Peripherals

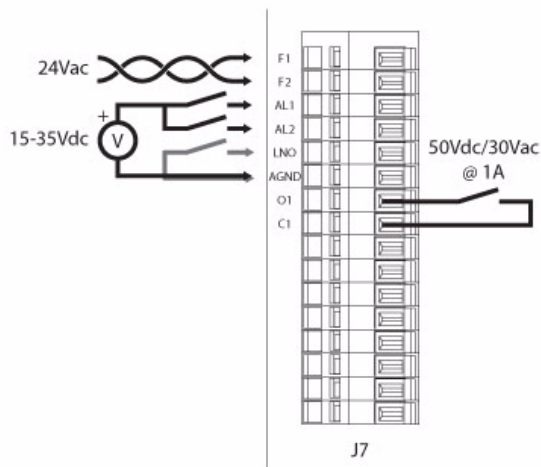
Reference	Description
F1 and F2	Feed 1, 24 VAC for optional washer; Feed 2, 24 VAC for optional washer
O1-C1 and O2-C2 (O=Output, C=Common)	Dry contact output that can be activated by alarm or by user (50 VDC or 30 VAC @ 1A)
AL1, AL2, AL3, and AL4, COM	Alarm inputs 1-4, voltage-controlled (10-35 VDC supplied externally), referred to common COM



CAUTION!
The system is TNV-1 type, do not connect to SELV circuits.

5.2 Connecting to the IR360 Base

The IR360 base has a 16-pin connector for which the following connections are illustrated:



Reference	Description
F1 and F2	Feed 1, 24 VAC for optional washer; Feed 2, 24 VAC for optional washer
O1 and C1 (O=Output, C=Common)	Dry contact output that can be activated by alarm or by user (50 VDC or 30 VAC @ 1A)
AL1 and AL2	Alarm inputs 1-2, voltage-controlled (10-35 VDC supplied externally), referred to AGND
AGND	Alarm Ground & External IR probe common
LNO	External photosensor/IR probe

5.3 Fixing the Top Unit



WARNING!

Hazardous Moving Parts. Keep Fingers and Other Body Parts Away.

Each time the top unit requires re-assembling, the screw seals should be replaced (use a calibrated torque wrench setting of 2.1 Nm) to ensure the appliance remains water tight. To attach the top of the unit to the base, do the following:

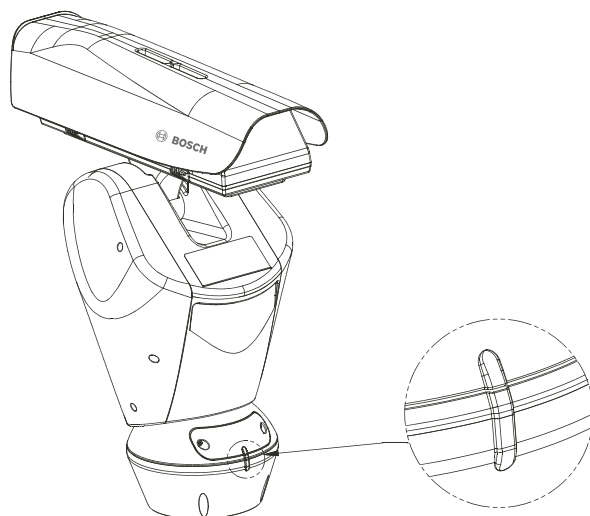


Figure 5.2 Aligning the Tabs

1. Push down to snap into place.
2. Attach the top unit to the base using the supplied attachment screws and corresponding seals.
3. Tighten the base with a 4 mm Allen wrench.

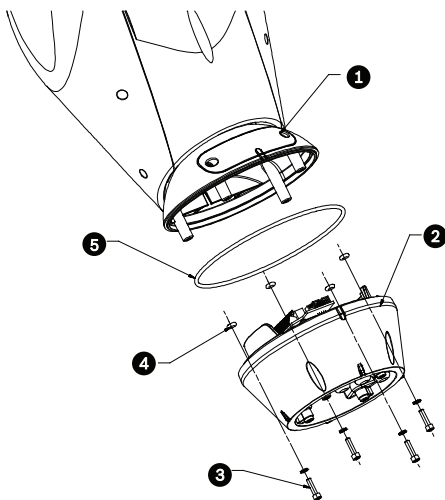


Figure 5.3 Attaching the Top Unit

Reference #	Description
1	Configuration Window
2	Base
3	Screw
4	Screw Seal
5	Gasket

WARNING!

Place the provided safety label near unit that warns of moving parts.



5.4 IR360 Models (optional)

The device must be configured to mount two of the Bosch UFLED illuminators. The illuminators are connected to the bracket supplied with the pan and tilt motor.

**CAUTION!**

For operational reasons, both spotlights must be fitted.
When turning on, the device looks for the angular reference.

5.4.1 Fitting the Bracket

Position the bracket on the bottom of the housing as shown in the illustration. Insert the screws with the washers into the respective holes and tighten. Make sure the bracket is fastened down firmly. Use only the material supplied with the kit.

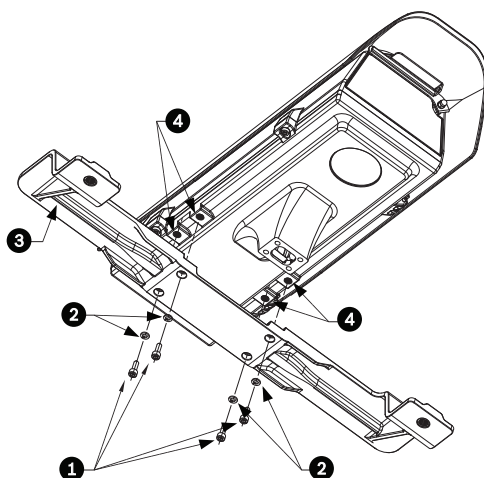


Figure 5.4 Fitting the Bracket

Reference	Description
1	Screws
2	Washers
3	Bracket
4	Holes

5.4.2

Assembling the Spotlights

Position the bracket so that the threaded holes are on the same axis as the holes on the body of the spotlight. Fix the two components using the screw, the crinkle washer, and the plane washer.

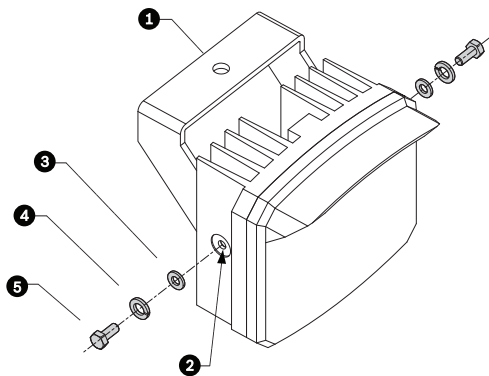


Figure 5.5 Assembling the Spotlight

Reference	Description
1	Bracket
2	Spotlight holes
3	Plane washer
4	Crinkle washer
5	Screw

5.4.3

Fitting the Spotlight on the Bracket

Position the gasket between the bracket and the spotlight. Place the crinkle washer and the nut in the respective hexagonal seat. Fix the assembly using the screw and it washer. Make sure the spotlight is fastened firmly to the bracket. Complete the necessary wiring and configure the on-screen menu to disable complete rotation of the pan and tilt.

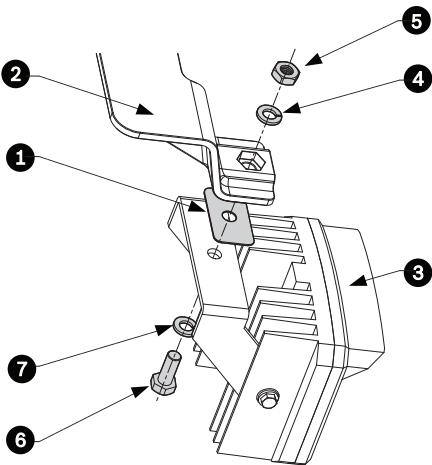


Figure 5.6 Fitting the Spotlight on the Bracket

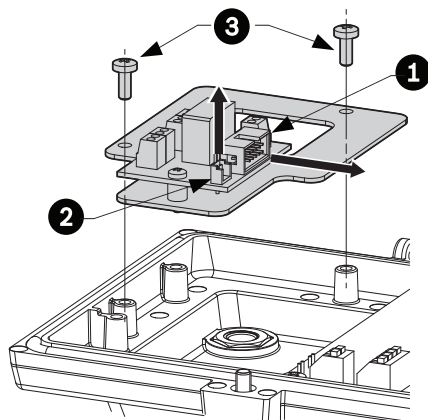
Reference	Description
1	Gasket
2	Bracket
3	Spotlight
4	Crinkle washer
5	Nut
6	Screw
7	Washer

**DANGER!**

During normal operation, the surface of the spotlight can reach very high temperatures. Do not allow direct contact. Ensure to position the product where it is inaccessible to unauthorized persons.

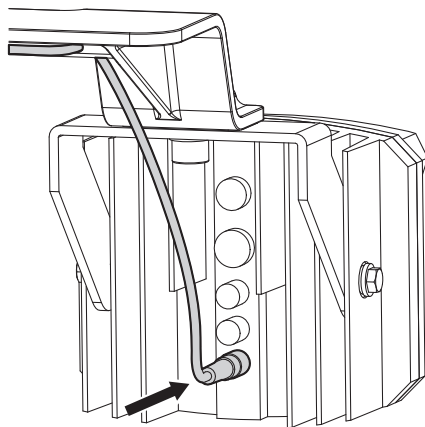
5.4.4**Infrared LED Spotlight Connections and Configurations**

1. Open the housing.
2. Extract the support plate from the housing.
3. Disconnect the flat cable, disconnect the relay power supply connector, and remove the screws.

**Figure 5.7** LED Connections

Reference	Description
1	Flat cable
2	Power supply connector
3	Screws

4. Connect the power cable to the spotlight.

**Figure 5.8** Connecting the Power Cable to the Spotlight

5. Thread the cable through the holes in the pan and tilt bracket.

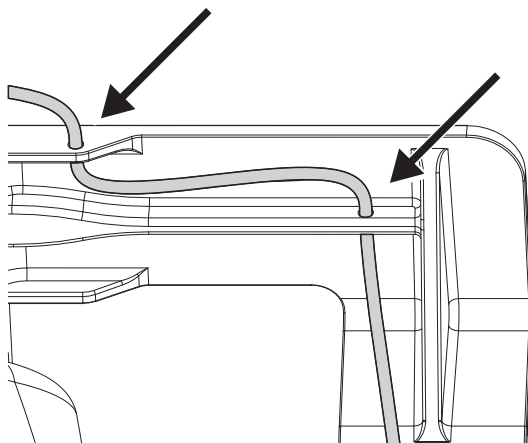


Figure 5.9 Threading the Cable through the Bracket

6. Insert the cable in the cable glands mounted in the lower part of the housing so that they protrude about 20 cm.

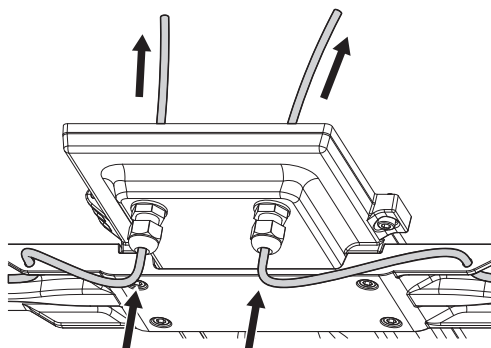


Figure 5.10 Inserting the Cable through the Cable Glands

7. Place the desiccant bag in the housing and fasten the support plate to the housing. To complete the operation, it is necessary to connect the flat cable and the relay power supply connector previously disconnected.

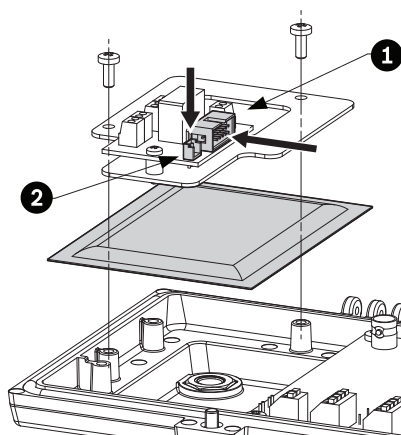


Figure 5.11 Inserting the Desiccant Bag

Reference	Description
1	Flat cable
2	Relay power supply connector

8. Connect the cables as illustrated.

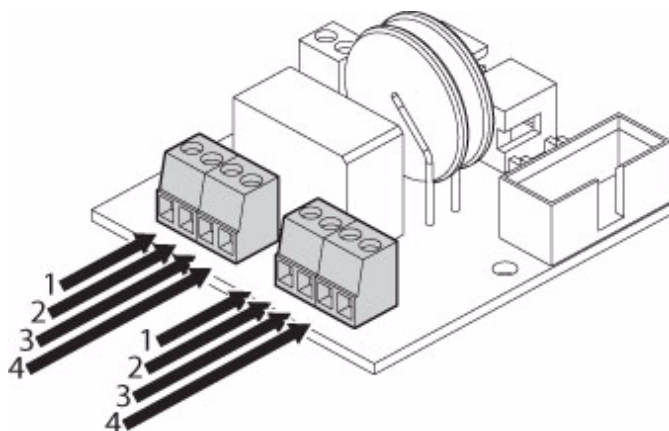


Figure 5.12 Connecting the IR Cables

Reference	Color	Description
1	Brown	24 VAC1
2	White	24 VAC1
3	Black	24 VAC2
4	Blue	24 VAC2

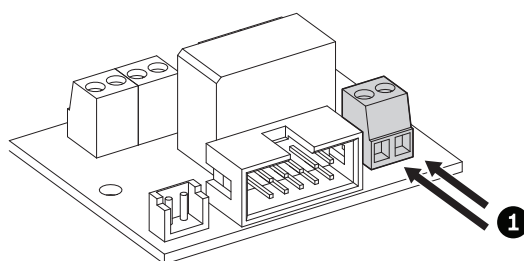


Figure 5.13 Switching Day and Night Mode

Reference	Description
1	Night Mode



NOTICE! The day/night mode relay is pre-wired. This drawing is for reference only. For more information on how to operate the day/night mode, please call technical support 1-800-326-1450.

6 Configuring the Device

Before powering the High Speed Pan/Tilt, it must be properly configured. To configure the DIP switches inside the configuration window, proceed as follows:

1. Open the configuration window (as seen in *Figure 6.1*) by unscrewing the screws with a 3 mm Allen wrench.
2. Verify that the position of the DIP switches are the same as in *Figure 6.1*.

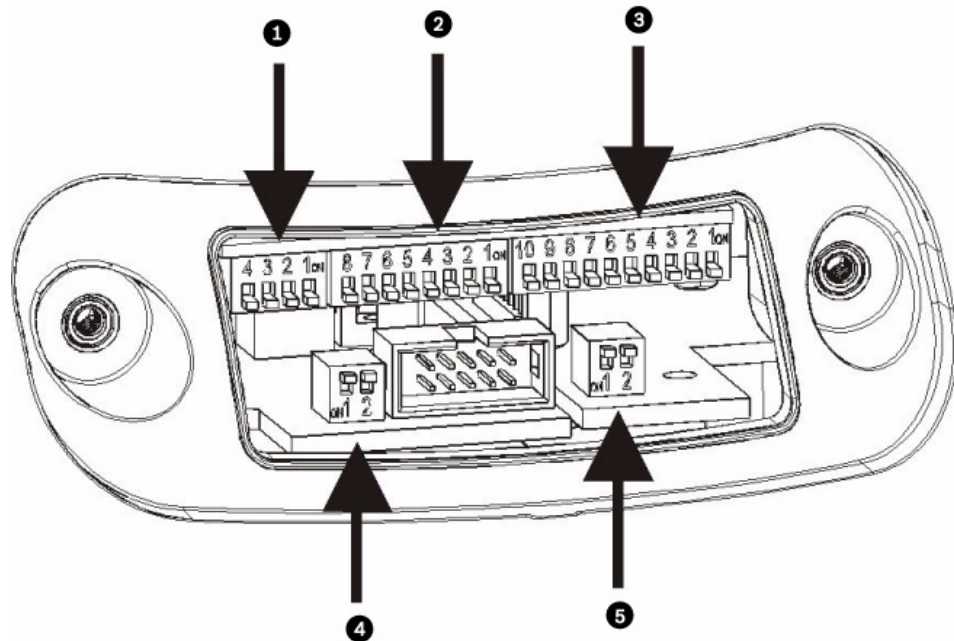


Figure 6.1 Positioning the DIP Switches

Reference	Description
1	Pelco D Baud Rate
2	Not Used, All Off
3	Address
4	RS485 Terminations
5	Biphase + Bilinx

- For DIP switches (Reference 1-3 *Figure 6.1*), when the rocker is down the switch is **OFF** or represents the logical value “0”; when the rocker is up, the switch is **ON**, with logical value “1.”
- For DIP switches (Reference 4-5 *Figure 6.1*), when the rocker is up the switch is **OFF** or represents the logical value “0”; when the rocker is down, the switch is **ON**, with logical value “1.” The white rectangle represents the position of the rocker.

6.1 Pelco D Baud Rate

Dip switches 4, 3, and 2 are used to set the communication rate of the device according to the table below:

Dip Switch 4	Dip Switch 3	Dip Switch 2	Dip Switch 1	Baud Rate
Off	Off	Off	Off	300 Baud
On	Off	Off	Off	600 Baud
Off	On	Off	Off	1200 Baud
On	On	Off	Off	2400 Baud
Off	Off	On	Off	4800 Baud
On	Off	On	Off	9600 Baud
Off	On	On	Off	19200 Baud

6.2 Protocol

There is no need to set any particular protocol, the UPH is auto-sensing. The protocols supported are:

Protocol	Baud Rate	Menu Setup (OSD)
Pelco D	Selectable (8N 1)	Preset 95
Biphase and Bilinx	Auto	AUX-On 200

6.3 Setting the Address

You can set the address for the UPH address using the Address switched (see item 3 in *Figure 6.1*).

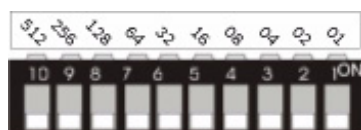


NOTICE! The highest address using the Bosch OSRD protocol is 998. The highest address using the Pelco D protocol is 255.

Binary code is used to select the address using the 10 DIP switches. The up position represents binary value “1”, while the down position represents binary value “0”.

To convert a decimal address to a binary address, use the following technique.

- Assign a binary value to each DIP switch, starting with a binary value of “1” for DIP switch 1. If the DIP switch is “on” then the number associated with the switch is stored.



- Consider the decimal address and start adding the DIP switch values from the left, skipping a DIP switch value that is higher than the decimal address.
- Turn a DIP switch to “on” if its associated value is used for the address. Keep the DIP switch “off” if its associated value is too high or is not needed to add up to the decimal address.

For example, to convert the decimal address 237 to binary:

Flag each binary digit needed to add up to 237 starting from the left. Do not flag 512 and 256 since these values are larger than 237. The first binary value to flag is 128; then flag 64 and 32 adding up to 224. Do not flag 16 because that puts the decimal value over 237. The next digit to flag is 8, then skip 4 (too large), and flag the 2 and 1. The flagged numbers should equal 237: $128+64+32+8+2+1=237$.

The following table lists DIP switch positions for various decimal addresses:

		DIP Switch Positions									
		10	9	8	7	6	5	4	3	2	1
		512	256	128	64	32	16	8	4	2	1
Decimal Address	Binary Value										
1	1	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON
2	10	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF
4	100	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF
8	1000	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF
143	1000 1111	OFF	OFF	ON	OFF	OFF	OFF	ON	ON	ON	ON
299	1 0010 1011	OFF	ON	OFF	OFF	ON	OFF	ON	OFF	ON	ON
998	11 1110 0110	ON	ON	ON	ON	ON	OFF	OFF	ON	ON	OFF

6.4 RS485 Line Termination

Serial Lines Termination Switches (refer to item 4 in *Figure 6.1*):

- Dip-switch 1 is not used (the RS485-1 line is not available).
- Dip-switch 2 is used to enable the line termination of RS485-2 serial line (Pelco D only).
- Down/On = terminated
- Up/Off = Open

6.5 Biphase/Bilinx Termination

Bilinx and Biphase Switches (refer to item 5 in *Figure 6.1*):

- Dip-switch 1 is used to enable the line termination of a Biphase serial line.
- Down/ON = terminated. Up/OFF = open (daisy chain).
- Dip-switch 2 is used to select the video format (Down/ON = PAL, Up/OFF = NTSC).

6.6 Connections

All versions support Bilinx and Biphase telemetry control, i.e.: PTZ.

The PTZ menu setup of UPH Series is done via the **AUX ON - 200 - Enter**. The camera menu setup is done via two different AUX commands, i.e.: **AUX ON - 46 - Enter** (Dinion main menu) and **AUX ON - 801 - Enter** (Dinion installation menu). See *Section 9 Keyboard Commands List - Bosch, Page 59* for more information about keyboard commands.

Bilinx is a Bosch two-way communication protocol that allows remote control, configuration, and updates over a video coax cable. Bilinx is available on all UPH models.

Biphase is used for communicating telemetry (control) and set up information with the UPH-Series units over a shielded twisted pair. Biphase does not pass the video signal from the UPH-Series units, so a separate video coax cable is required. Biphase should be wired with Belden 8760 or equivalent. Biphase is available on all UPH models.

Note: If the UPH is the only Biphase unit connected, or the last unit in a daisy chain configuration, then turn **ON** dip-switch 1 of Biphase + Bilinx to terminate the data line. Turn **OFF** dip-switch 1 of Biphase + Bilinx for each UPH in a daisy chain (i.e. unterminated). A maximum of four (4) UPH units can be daisy chained together.

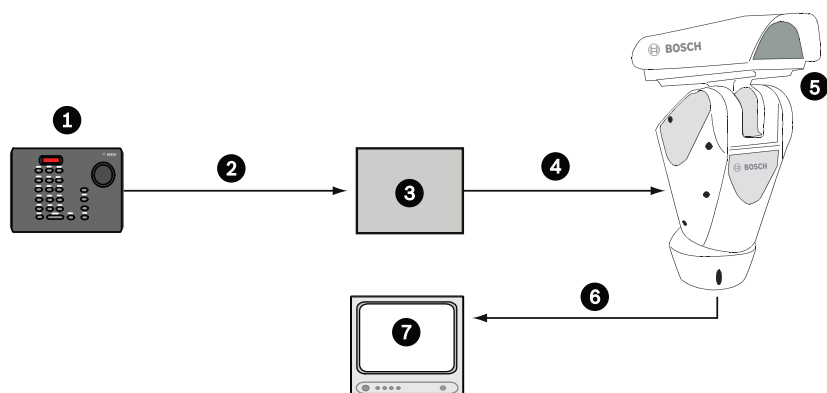


Figure 6.2 Typical Setup via an Interface Box

1	LTC 5136 or equivalent	5	UPH Series: unitized pan/tilt head
2	RS-232	6	Video out, coax
3	LTC 8786	7	CCTV Monitor
4	Biphase		

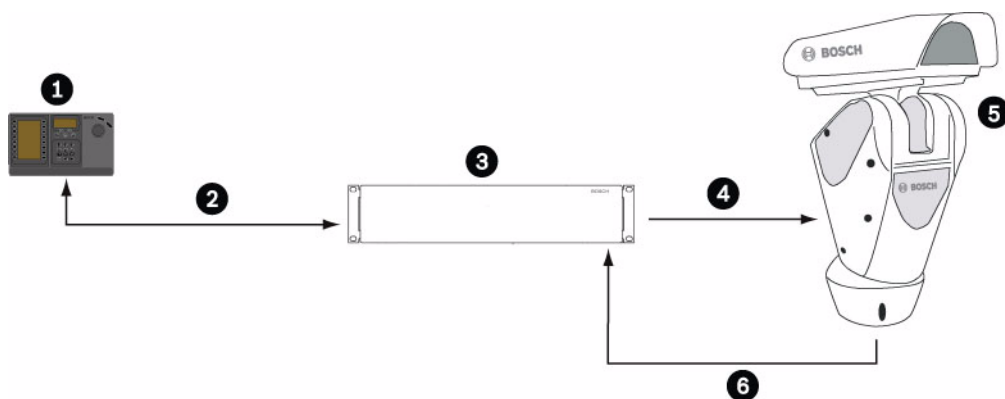


Figure 6.3 Typical Setup via an Allegiant with Biphase

1	IntuiKey Keyboard	4	Biphase
2	RS-485	5	UPH Series: unitized pan/tilt head
3	Allegiant Matrix Switcher	6	Video out, coax

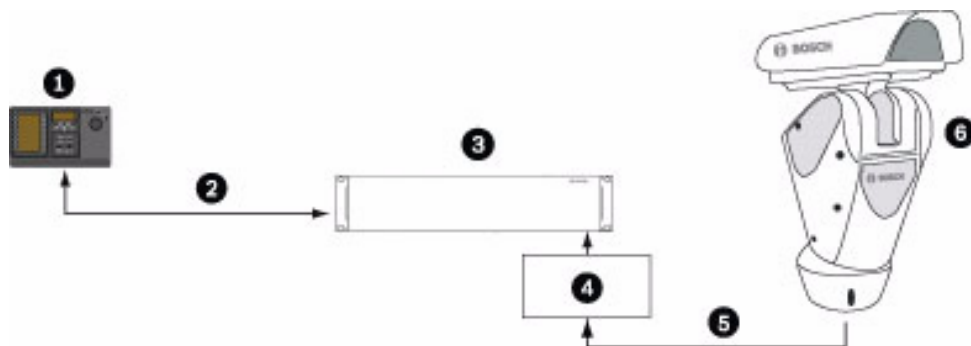


Figure 6.4 Typical Setup via an Allegiant + LTC 8016

1	IntuiKey Keyboard	4	LTC 8016 Bilinx Data Interface
2	RS-485	5	Bilinx/Video
3	Allegiant Matrix Switcher	6	UPH Series: unitized pan/tilt head

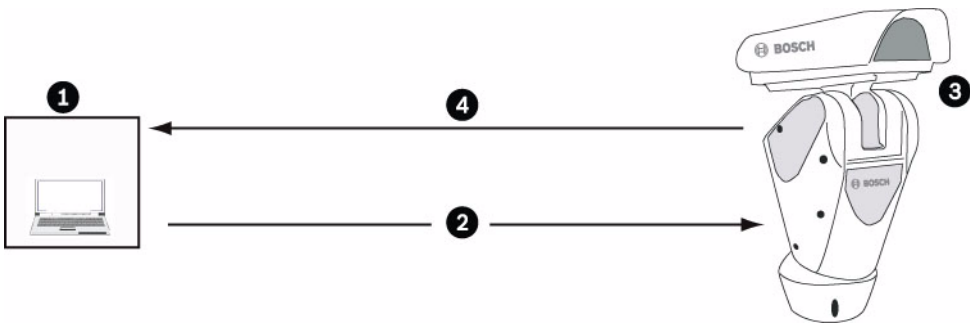


Figure 6.5 Typical Connections to a DiBos

1	DiBos 8
2	Biphase
3	UPH Series: unitized pan/tilt head
4	Video output coax

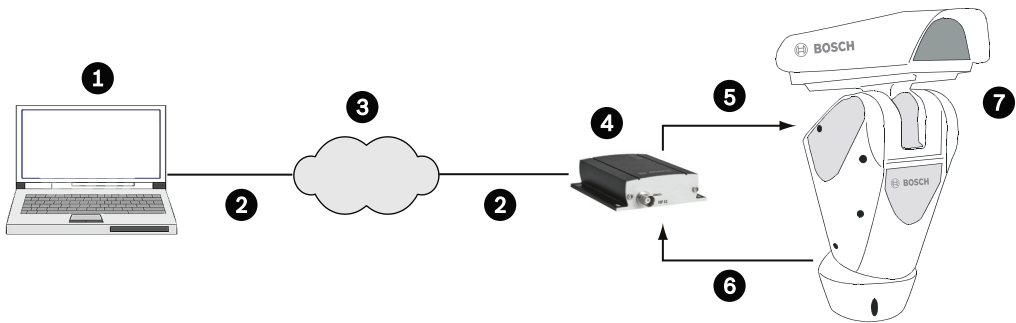


Figure 6.6 VIPX1 Connection Diagrams

1	Vidos, IE, DiBos 8, Bosch VMS or equivalent	5	RS-485-2
2	Ethernet	6	Video
3	LAN	7	UPH Series: unitized pan/tilt head
4	VIP X1		

7 On-screen Display (OSD)

During normal UPH operation, it is possible to activate the on-screen menu in order to set the advanced functions using the corresponding key/s.

Each on-screen display (OSD) shows a list of parameters or submenus that can be selected by the operator. For example, to access the main menu in the High Speed Pan/Tilt, click **AUX - ON - 200** then **Enter**. If the camera is a Dinion^{XF} option, then the Dinion^{XF}'s main menu can be accessed by clicking **AUX - ON - 46**, then **Enter**. The Dinion^{XF}'s Installer menu can be accessed by clicking **AUX - ON - 801** then **Enter**.

- To scroll through the parameters, move the cursor by operating the joystick up and down.
 - To scroll through the parameters, move the cursor by operating the joystick up or down.
 - The cursor is indicated by the “” symbol at the beginning of a line, i.e. on the left side of the screen/monitor.
- The “>” symbol at the end of a line, i.e. on the right of the screen/monitor, indicates the presence of a submenu. To enter the submenu, confirm the menu item by pressing the **Focus Near** or **Far** key.
- To exit the submenu, press **Iris Open** or **Iris Close** button.

MAIN MENU	
1 - LANGUAGE	>
2 > DISPLAY SETUP	>
3 - MOTION PARAMETERS	>
4 - CAMERA PARAMETERS	>
5 - LOAD DEFAULT CONF	>
6 - SETUP INFO	>

Table 7.1 Accessing the Main Menu - AUX On 200

MODE	
ALC	2
ENHANCE	
COLOR	
BLC	OFF
VMD	OSD
MODE ID	TRAFFIC
DEFAULTS	
	EXIT

Table 7.2 Accessing the DinionXF camera Setup Menu - AUX On 46
(screen may differ depending on the camera type)



NOTICE!

Based on the model you are using, on-screen menus may vary slightly.

8Configuring the System

The UPH High Speed Pan/Tilt can be configured through the on-screen display (OSD). Open the main menu by pressing **AUX ON - 200 - Enter**. Use the joystick to move up and down through the menus. Press focus to select the sub-menu.

MAIN MENU		
1 - LANGUAGE	>	
2 - DISPLAY SETUP	>	
3 - CAMERA PARAMETERS	>	
4 - LENS PARAMETERS	>	
5 - LOAD DEFAULT CONF.	>	
6 - SETUP INFO	>	

8.1Language Menu

This menu is used to select and set the desired language. The default setting is English.

LANGUAGE MENU		
1 - ITALIANO		
> 2 - ENGLISH	OK	
3 - FRANCAIS		
4 - DEUTSCH		

Table 8.1 Language Menu with English Selected

8.2Display Setup Menu

The **Display Setup** menu is used to define settings for the information that is permanently displayed on the screen.

DISPLAY SETUP MENU		
> 1 - PAN/TILT POSITION	:	Y
2 - PRESET TITLE	:	Y
3 - PRESET POSITION	:	Y
4 - TILT LIMIT TITLE	:	Y
5 - VIDEO SIGNAL	:	PAL
6 - INTERLACED VIDEO	:	Y
7 - AREA PARAMETERS	>	
8 - DISPLAY PARAMETERS	>	

Table 8.2 Display Setup Menu

Feature	Description	Default	Options
PAN/TILT POSITION	Shows the current position of the device (in degrees) with reference to the home position.	YES	YES, NO
PRESET TITLE	Enables or disables the preset title on the display.	YES	YES, NO
PRESET POSITION	Enables or disables the preset number reached on the display.	YES	YES, NO
TILT LIMIT TITLE	Enables or disables displaying if the tilt limit is reached.	YES	YES, NO
VIDEO SIGNAL	Type of video signal. Select to automatically adjust position of OSD.	PAL	PAL, NTSC
INTERLACED VIDEO	Enables or disables the display for interlaced video.	YES	YES, NO
AREA PARAMETERS (sectors)	Information about area (or sector) that the unit is pointing towards.		
DISPLAY PARAMETERS	Setup of location of text position/type on the display.		

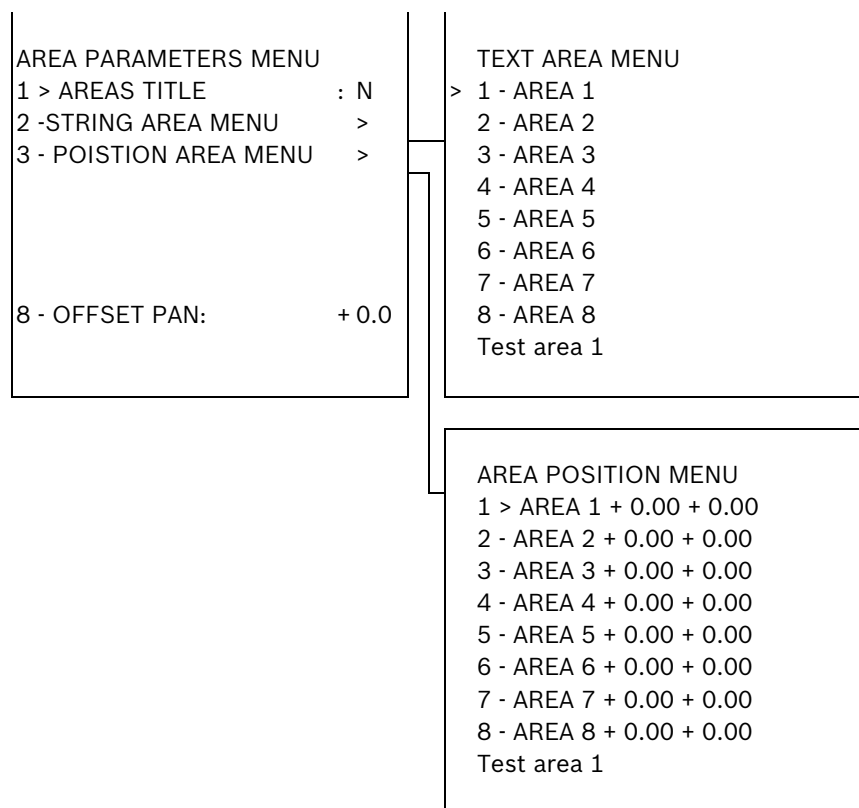
8.2.1

Area Parameters Menu

The **Area Parameters** menu enables the user to show a message on the screen, depending on the horizontal position reached by the device; this is sometimes known as sector information. From this menu, it is possible to enter two (2) lower menus that are used to set the text for each area, and the start and end positions (in degrees) of these areas. It is possible to set up to eight (8) areas with their own title, start, and end positions.

For example, to activate the first title and obtain a message when the device is between +80 ° and +120 ° in the horizontal (pan) direction, proceed as follows:

1. Enter the **Position Area** menu.
2. Select Area 1 by pressing **Focus**; an arrow starts blinking next to the start position. Press **Focus** again, use the joystick to enter the value +080.00 in the left column (start position of text coming on screen), then press **Focus** to store that value. Repeat the process, but put +120.00 in the right column (stop position of text removed from the screen).
3. In the **Text (String) Area** menu, select the first line and enter the desired text.
Note! If the area position start and end values are set to +0.00, this disables the text display (defaults are all set to +0.00).



Feature	Description	Default	Options
AREA TITLE	Enables / disables the on-screen message depending on the horizontal position reached by the device.	NO	YES, NO
STRING AREA MENU	Enables the user to edit a customized, on-screen text message that is activated when the device reaches a defined, horizontal position.	N/A	Area 1 to Area 8
POSITION AREA MENU	The horizontal position reached by the device that prompts a customized on-screen text message.	N/A	Area 1 to Area 8
OFFSET PAN	Adds a corresponding value (offset) in degrees to the pan references used for displaying the area text. For example, if this value is set to +45.0 ° then all references will be shifted in PAN by +45 ° with respect to the system's physical reference.	+0.00	- 180.00to+ 180.00

Table 8.3 Area Parameters Menu

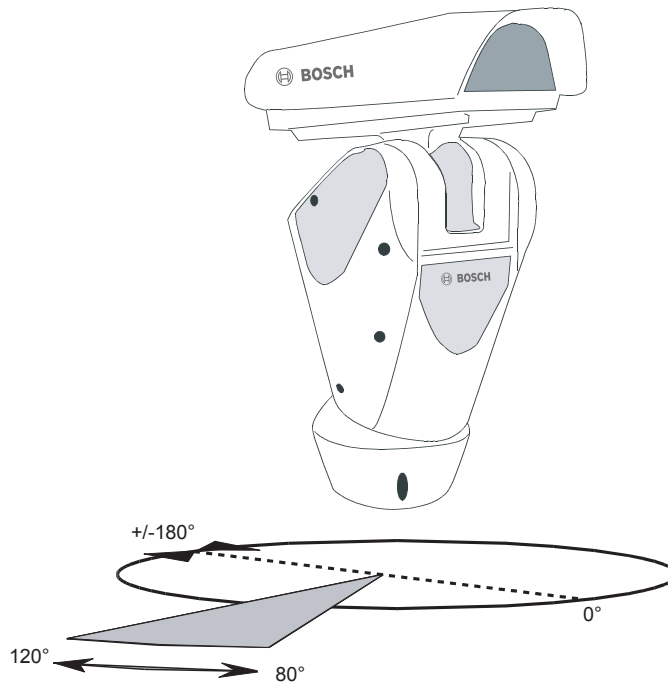


Figure 8.1 Setting the Area Position Values

8.2.2

Changing the Edit Text Menu

To change the text within the **Edit Text** menu, proceed as follows:

1. Upon accessing the **Edit Text** menu, select **String Edit**. The first field flashes a “v”, indicating it is in **Edit** mode.
2. Press the **Focus** button. The cursor flashes at the bottom of the screen, corresponding to the groups of alpha/numeric characters. Operate the joystick (up, down, left, and right) to select a group of characters.
3. Press the confirmation (**Focus**) button to confirm the alpha/numeric group containing the character to be added. The first value in the sequence you selected starts flashing.
4. Move the joystick up or down to choose a value.
5. When finished, press the **Focus** button to confirm your choice. The “v” automatically moves to the right.
6. Repeat steps 2-5 until finished.
7. When finished, press the Iris button to exit the menu.

Note: To skip a space while in edit mode, press the Iris button, then move the joystick to the right past the number spaces you would like to skip. Press the Focus button to resume adding values.

The character being edited flashes and the joystick (up and down) can be used to change it. After making the change, confirm and continue to edit the text, or else exit with the **Iris** button.

EDIT TEXT MENU			
v -----			
Test Area 1			

>	1ABC	2DEF	3GHI 4JKL
	5MNO	6PQR	7STU 8VWX
	9YZ	0()*	+,-.

Table 8.4 Edit Text Menu

Offset Pan

By default, the offset pan is +0.00. The value can be changed to move the default pan position of the unit to wherever is convenient. For example, if the installation requires that the NORTH position should be at 0.00 ° (pan), then an offset pan can be entered to compensate for any deviation from NORTH. After mounting, the NORTH position was found to be +41.37 ° (pan position); therefore, the offset pan should be set to - 41.37 ° to make the pan +0.00 ° position point to NORTH.

This has an effect on the Area Titles as defined in the **Area Position** menu. In the above example, after the offset pan has been set to -41.37 °, the Area Text Menu “1 - Area” could be changed to “1 - NORTH” to display NORTH on the screen at pan +0.00 ° position.

8.2.3

Display Parameters

The **Display Parameters** menu is used to enter the settings menus for the device movement parameters.

DISPLAY PARAMETERS	
> 1 - OSD VIDEO ENABLING	: Y
2 - VIDEO CHAR TYPE	: 000
3 - HORIZONTAL DELTA	: 000
4 - VERTICAL DELTA	: 000
5 - ADDRSS NUMBER	Y

OSD Video Enabling	Set to YES to superimpose the menu text over the video signal from the camera. Set to NO to have a blue screen behind the menu TEXT.
Video Character Type	Set to 0 to make the background of the text to transparent; set to 1 to make it black.
Horizontal Delta/Vertical Delta	These set the position of reference to the title so that the text can be centralized. 0 (left, up) and 6 (right, down).
Address Number	If enabled, the address number of the unit is shown at the top left of the screen during normal operation. Yes/No.

8.3 Motion Parameters Menu

The **Motion Parameters** menu is used to control the speed, limits, preset/patrol/autopan, wiper-washer, and the alarm settings of the UPH.

MOTION PAR MENU		
> 1 - SPEEDS		>
2 - LIMITS		>
3 - PRESET/PATROL/PAN		>
4 - WIPER-WASHER		>
5 - ALARMS		>

8.3.1 Speed Menu

The **Speed** menu is used to control the pan and tilt movement of the UPH in manual control mode using the joystick. See *Section 8.3.1 Speed Menu, page 45* for setting pan and tilt speeds for the presets, patrols, and scans.

SPEED MENU			PAN SPEED MENU		
> 1 - PAN SPEED		>	1 > SPEED 1...		1.0
2 - TILT SPEED		>	2 - SPEED 2...		2.0
3 - ZOOM PROP. SPEED		:N	3 - SPEED 3...		5.0
			4 - SPEED 4...		10.0
			5 - SPEED 5...		20.0
			6 - SPEED 6...		30.0
			7 - SPEED 7...		40.0
			8 - DEFAULT		
			TILT SPEED MENU		
			" 1 - SPEED 1...		1.0
			2 - SPEED 2...		2.0
			3 - SPEED 3...		3.0
			4 - SPEED 4...		5.0
			5 - SPEED 5...		8.0
			6 - SPEED 6...		10.0
			7 - SPEED 7...		20.0
			8 - DEFAULT		

Feature	Description	Default	Options
PAN SPEED 1	Correspondence between joystick position and UPHspeed. Joystick positions have been divided into 7 levels for both axis (pan & tilt); each level corresponds to a defined speed which can be modified by the user.	1.0	0.1-100.0*
PAN SPEED 2		2.0	0.1-100.0
PAN SPEED 3		5.0	0.1-100.0
PAN SPEED 4		10.0	0.1-100.0
PAN SPEED 5		20.0	0.1-100.0
PAN SPEED 6		30.0	0.1-100.0
PAN SPEED 7		40.0	0.1-100.0
Note: *IR models are limited to 40 deg/s on pan			

Feature	Description	Default	Options
TILT SPEED 1	Correspondence between joystick position and UPHspeed. Joystick positions have been divided into 7 levels for both axis (pan & tilt); each level corresponds to a defined speed which can be modified by the user.	1.0	0.1-40.0*
TILT SPEED 2		2.0	0.1-40.0
TILT SPEED 3		3.0	0.1-40.0
TILT SPEED 4		5.0	0.1-40.0
TILT SPEED 5		8.0	0.1-40.0
TILT SPEED 6		10.0	0.1-40.0
TILT SPEED 7		20.0	0.1-40.0
Note: *IR models are limited to 30 deg/s on tilt			

The data is expressed as degrees per second.

Zoom dependent speed by default is turned off. When the zoom-dependent function is turned off, then the pan and tilt speeds of the UPH are unaffected by the zoom measurement of the camera/lens combination. If the zoom-dependent function is turned on, the zoom measurement of the camera/lens combination affects the pan and tilt speeds. This is useful when the zoom is in telephoto (i.e. zoomed in); it slows down the pan and tilt speeds so that very fine adjustments can be made to follow moving subjects.

8.3.2

Limits

The **Limits** menu sets the movement limits for the UPH. These limits apply to all presets, autopan and patrols, including manual operation of the UPH using the joystick. After the limits are set in the OSD and the UPH moves into the “limited pan and tilt zone”, it will not move outside of those limits until they are altered in the OSD or the UPH is reset. On reset, the UPH returns to within the limited pan and tilt zone.

```

LIMITS MENU
1 > PAN LIMITS          :  N
2 - START PAN           : + 0.00
3 - END PAN             : + 0.00
4 - TILT LIMITS         :  N
5 - START TILT          : + 0.00
6 - END TILT            : + 0.00
9 - RAMP TYPE           :  012

```

Feature	Description	Default	Options
ENABLE PAN LIM.	Enables limits and values in degrees taken by the device in pan. Enables or disables complete rotation for scan/patrol/autopan movements (this function is useful when using accessories with external cables, such as infrared spotlights, where continuous rotation of the UPH could break the accessories themselves).	NO	YES, NO
START PAN	Enables the location that the UPH begins to pan.	+0.00	-180.00° to +180.00°
END PAN	Enables the location that the UPH stops panning.	+0.00	-180.00° to +180.00°
ENABLE TILT LIM.	Enables limits and values in degrees taken by the device in tilt.	NO	YES, NO
START TILT	Enables the location that the UPH begins to tilt.	+0.00	-40.00° to +90.00°
END TILT	Enables the location that the UPH stops tilting.	+0.00	-40.00° to +90.00°
RAMP TYPE	Changes start and stop times for the UPH. The higher the number, the greater the acceleration/deceleration during starting/stopping.	012	000 to 012

8.3.3

Preset/Patrol/Autopan

The **Preset/Patrol/Autopan** menu sets the movement limits related to the UPH.

MOTION PARAMETERS MENU		
> 1 - PRESET		>
2 - SPECIAL PRESET PARAM.		>
3 - HOME POSITION		>
4 - PATROL		>
5 - AUTOPAN		>
8 - MOTIONS RECALL		>

Feature	Description
PRESET	A pre-selected and stored combination of pan, tilt and zoom positions that allow a set view to be recalled.
SPECIAL PRESET PARAMETER	Allows change to the default values for preset speeds and forces it into all presets.
HOME POSITION	A special preset that is automatically recalled after an interval of time (see other confide. menu).
PATROL	Manually change the path of the automatic cycle between preset positions.
AUTOPAN	The camera pans continuously between right and left limit settings.
MOTIONS RECALL	Allows definition of action after an interval of inactivity (it can recall a patrol, autopan, home position, etc).

Preset Menu

The **Preset** menu displays and allows changes to all parameters for the available preset positions in the UPH. Use the up and down function of the joystick to move between the presets in units, i.e.: PRST 01 to PRST 02 to PRST 03. Use the left and right function of the joystick to move between the presets in tens, i.e.: PRST 01 to PRST 11 to PRST 21. Press **Focus** to edit the chosen preset, using the joystick and **Focus** button to fine tune these parameters. Use the **Iris** button to exit.

PRESET EDIT MENU			
PRST	PAN	:	+ 0.0
01	TILT	:	+ 0.0
	ENABLE	:	N
	ZOOM	:	00000
	FOCUS	:	00000
	IRIS	:	00000
	SPEED	:	040.0
	DWELL	:	00001
	TXT: PRESET 001		

Feature	Description	Default	Options
PAN	Moves a camera on a horizontal axis.	0.0	-180.00° to +180.00°
TILT	Moves a camera on a vertical axis.	0.0	-40.00° to +90.00°
ENABLE	Enables preset.	NO	YES, NO
ZOOM	Changing the effective focal length to allow different fields of view to fill the picture area. Zoom can be optical, where the lens is adjusted, or digital, where a portion of the view selected is magnified electronically.	00000	65535
FOCUS	Positions	00000	65535
IRIS	Positions	00000	65535
SPEED	Speed for reaching the position when the preset position is loaded by the patrol function (preset tour).	040.0	.1 to 100.0**
DWELL	Dwell time during patrol and autopan movements.	00001	00000 to 01000 sec.
TXT: PRESET	Message displayed when the preset position is reached.		
Note: *IR models are limited to 40 deg/s on pan			

Special Preset Parameters

The **Special Preset Parameters** menu can be used to make parameter settings. Increase the default value to increase the speed between presets or the scan speed.

SPECIAL PRESET PAR MENU	
> 1 - PRESET SPEED REF.	: 20.0
2 - SCAN SPEED	: 20.0
3 - TILT SPEED REDUC.	: 100
6 - PRST DWELL TIME	:00005
7 - FORCE PRST DW.TIME	:N
8 - FORCE PRST SPEED	:N

Table 8.5 Special Preset Parameters

Feature	Description	Default	Options
PRESET SPEED REF.	Default value whenever a preset position is stored.	20.0	0.1 to 100.0*
SCAN SPEED	Reference speed used when a preset position is recalled by the shot command.	20.0	0.1 to 100.0*
TILT SPEED REDUCTION	Tilt speed reducing factor with respect to pan speed.	100.0	0.1 to 100.0
PRESET DWELL TIME	Time in seconds to dwell at preset position.	00005	00001 to 01000

Feature	Description	Default	Options
FORCE PRST DW.TIME	Forces the default dwell time value for all presets.	NO	YES, NO
FORCE PRST SPEED	Forces the default speed value for all presets.	NO	YES, NO
Note: *IR models are limited to 40 deg/s on pan			

Home Position

The **Home Position** menu is one of the 250 presets which can be defined as a preset position. Please note that through the normal Set Shot Command, only 99 presets can be stored. Use this menu for presets 100 to 250.

HOME MENU	
> 1 - HOME POSITION	: 00001
2 - REACHED SPEED	: 20.0

Feature	Description	Default	Options
HOME POSITION	Preset position associated with the home function.	00001	00001 to 00250
REACHED SPEED	Speed for reaching the home position when it is loaded.	20.0	.1 to 100.0*

Note! Increase the reached speed from the default value to reach presets faster.

Note: *IR models are limited to 40 deg/s on pan

Patrol (preset tour)

The **Patrol** menu is a defined path from preset to preset. This can be from two (2) presets up to 250. For example, the random option allows various presets such as preset 4, then preset 1, then preset 8, then preset 3.

PATROL MENU	
> 1 - START POSITION	: 00001
2 - END POSITION	: 00250
3 - FIRST PRST SPEED	: 20.0
4 - RANDOM	: N

Feature	Description	Default	Options
START POSITION	The first preset position considered valid for carrying out the patrol function.	00001	00001 to 00250
END POSITION	The last preset position considered valid for carrying out the patrol function.	00250	00001 to 00250
FIRST PRST SPEED	Speed at which the UPH reaches the first preset position when the patrol function is activated. Increase the First PRST Speed from the default value to reach presets faster.	20.0	01 to 100.0°*

Feature	Description	Default	Options
RANDOM	Enables execution of the Patrol function by passing through the defined positions in a random manner. The random sequence is continually recalculated.	NO	YES, NO
Note: *IR models are limited to 40 deg/s on pan			

Autopan

The **Autopan** menu is used to indicate preset position settings.

AUTOPAN MENU			
>	1 - START POSITION	:	00002
	2 - END POSITION	:	00001
	3 - REACH SPEED	:	10.0
	4 - FORWARD SPEED	:	10.0
	5 - REVERSE SPEED	:	20.0

Feature	Description	Default	Options
START POSITION	First preset position.	00002	00001 to 00250
END POSITION	Second preset position.	00001	00001 to 00250
REACH POSITION	Preset position to be reached.	010.0	.1 to 100.0
FORWARD SPEED	Speed for reaching the first preset position when the autopan function is loaded.	010.0	.1 to 100.0*
REVERSE SPEED	The return speed going from 2-1 (autopan only).	020.0	.1 to 100.0*
Note: *IR models are limited to 40 deg/s on pan			

Motions Recall Menu

The **Motions Recall** menu is used to activate the camera after a period of time that the joystick is not used. The options available are:

- Home - return camera to Home position
- Autopan - start the Autopan feature
- Patrol - start the Patrol feature

The period of time between the joystick not being used and activating one of the motion types is based on the dwell before activity setting (in seconds); by default the dwell is 50 seconds.

MOTIONS RECALL MENU	
1 - TIME ENABLING	: N
2 - MOTION TYPE	: HOME
3 - DWELL BEFORE ACT.	: 00050

Feature	Description	Default	Options
TIME ENABLING	When set to YES, the functionality is enabled and the action will be done after the dwell of inactivity. When set to NO, no action takes place after the dwell of inactivity.	NO	YES, NO
MOTION TYPE	Enables the type of movement to be loaded.	HOME	HOME, AUTOPAN, PATROL
DWELL BEFORE ACT.	Interval that the joystick is inactive before the movement setting is loaded.	00050	00005 to 01000 sec.

8.3.4

Wiper-Washer

Select UPH Pan/Tilt models have a wiper option used to operate an (external) pump for cleaning the glass. The spray for cleaning the glass is on the outside of the pan/tilt (see *Figure 8.2*). For cleaning, the UPH must be positioned with the glass facing the spray. Start the pump for the glass cleaning liquid and then start the wiper. It is necessary to set a preset position corresponding to the spray which is loaded when the “wiper” function is started.

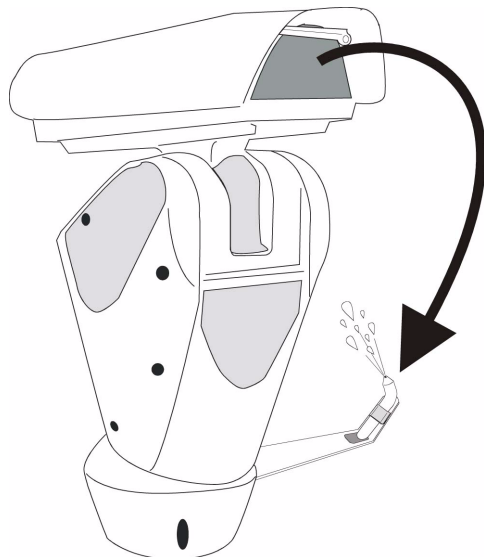


Figure 8.2 Wiper-washer Function

```

WIPER-WASHER MENU
> 1 - ENABLED           : N
  2 - PRESET POSITION    : 00001
  3 - RELAY NR.         : 00002
  4 - PUMP DELAY        : 00003
  5 - WIPER DURATION    : 00005
  6 - DELAY WIPER OFF   : 00002
  
```

Feature	Description	Default	Options
ENABLED	Enables the wiper function.	NO	YES, NO
PRESET POSITION	Enables the preset position to be reached.	00001	00001 to 00250
RELAYS NR.	Enables the relay to activate for water pump control.	00002	00001 to 00002
PUMP DELAY	The delay between the pump command and when the wiper starts moving.	00003	00001 to 00050
WIPER DURATION	The amount of time that the wiper wipes.	00005	00001 to 00050
DELAY WIPER	The amount of time that the wiper wipes without water.	00002	00001 to 00050

8.3.5

Alarms

The **Alarms** menu is used to set up the action and duration of the alarm when it is activated.

MOTION PARAMETERS MENU 1 - SPEED 2 - LIMITS 3 - PRESET/PATROL/AUTOPAN 4 - WIPER-WASHER " 5 - ALARMS	"	ALARM MENU > 1 - ACTION: : SCAN 2 - NR. : 1 3 - 4 - SHOW MESSAGE : N 5 - DURATION : 00000 6 - TXT: Test Alarm 1
ALARMS MENU > 1 - ALARM 1 2 - ALARM 2 3 - ALARM 3 4 - ALARM 4 > 5 - ALARMS TEST		TEST ALARMS MENU 1 - ALARM 1 : OFF 2 - ALARM 2 : OFF 3 - ALARM 3 : OFF 4 - ALARM 4 : OFF

Feature	Description	Default	Options
ACTION	Enables the action to take place when the alarm is activated.	DISABLE	DISABLE, SCAN, RELAY, AUTOPAN, PATROL, IR FILT
SHOW MESSAGE	Enables the display of an alarm message.	NO	YES, NO
DURATION	Length (in seconds) of alarm message display (0 means for the complete duration of the alarm).	00000	00000 to 01000
TXT: Test Alarm 1	Text associated with the alarm.		
ALARMS TEST	Displays the status of Alarm Inputs 1, 2, 3, and 4; either ON or OFF status (not user selectable).		

8.4 Camera/Infrared Parameters

This section covers the lens module options, area masking, and the infrared parameters menu.

8.4.1 Lens Modules Parameters and Area Masking

MODULE PARAMETERS > 1 - ZOOM/FOCUS/IRIS > 2 - AREAS MASKING > 3 - IR PROBE: INT*	MODULE PARAMETERS > 1 - ENABLED ZOOM Y * 2 - WINDOW ZOOM 003 3 - ENABLED FOCUS Y * 4 - WINDOW FOCUS 003 5 - ENABLED IRIS Y * 6 - WINDOW IRIS 003 8 - DEF. VALUES LOADING	
MASKING MANAGEMENT MENU > 1 - MASK TEXT > 2 - MASK POSITION >	AREAS MASKING TEXT MENU > 1 - MASK. 1 2 - MASK. 2 3 - MASK. 3 4 - MASK. 4 5 - MASK. 5 6 - MASK. 6 7 - MASK. 7 8 - MASK. 8 TEST MASK 1	EDIT TEXT MENU > 1 - STRING EDIT ----- TEST MASK 1 ----- 2 - DELETE STRING
AREA MASKING MENU 1 > AREA 1 + 0.00 + 0.00 2 - AREA 2 + 0.00 + 0.00 3 - AREA 3 + 0.00 + 0.00 4 - AREA 4 + 0.00 + 0.00 5 - AREA 5 + 0.00 + 0.00 6 - AREA 6 + 0.00 + 0.00 7 - AREA 7 + 0.00 + 0.00 8 - AREA 8 + 0.00 + 0.00 TEST MASK 1		

The “windows” are the thresholds used to determine that the saved pre-position has been reached. The threshold values range from 3 to 10 and refer to the voltage reading on the lens feedback potentiometers. A lower value indicates less hysteresis tolerance when reading the stored positions, while a higher value will indicate a wider margin when reading the positions. The configuration should be based on the parameters of the motorized lens zoom lens being used.

8.4.2

Infrared Parameters

The IR probe feature is used to control the switching of the IR illuminators and the camera from the Day to the Night mode. The following modes are available:

1. OFF: None of the operative modes designed to manage the IR illuminators is active.
2. Internal: The photo-sensor internal to the IR illuminators is used to control the Day/Night operation.
 - Power is always provided to the illuminator power inputs by the HSPS internal power source. The photo-sensor internal to the IR illuminators operates as follows:
Day: Illuminators are OFF and the HSPS Day/Night relay contact to the camera is OPEN.
Night: The photo-cell detects low light conditions, the illuminators turn ON, the HSPS Day/Night relay CLOSES, and the camera programming forces it into Night Mode.
3. External: An external photo-sensor is connected to the LNO terminal to control the Day/Night operation.
 - Power to the illuminator power inputs is controlled (ON/OFF) by the HSPS internal power source.
 - The external photo-sensor is used to control the ON/OFF state as follows:
Day: The relay output of the sensor is OPEN, the HSPS removes power from the Illuminators, and the HSPS Day/Night relay contact to the camera is OPEN.
Night: The photo-cell detects low light conditions, relay output of the sensor is CLOSED, the HSPS applies power to the illuminators, the HSPS Day/Night relay CLOSES, and the camera programming forces it into Night Mode.

8.4.3

Illuminator/Dinion Configuration

The illuminators and the Dinion camera both require the following configurations to operate in these 2 different modes. Two additional choices are available for this type of operation:

1. No Synchronization - both illuminators have an internal photo-cell and are set to operate independently of each other. This is the default configuration.
2. Synchronization (Optional Cable P/N UFLED-CL-1M)
 - Use of this cable and the following adjustments will allow the illuminators to be synchronized so that they will both activate at the same time.
 - Connect the cable between the Day/Night output contact of illuminator 1 and the Telemetry input of illuminator 2 as shown.
3. Set the trip threshold of the two (2) illuminators (see *Table 8.6*). This is the preferred configuration when using the INTERNAL sensors.

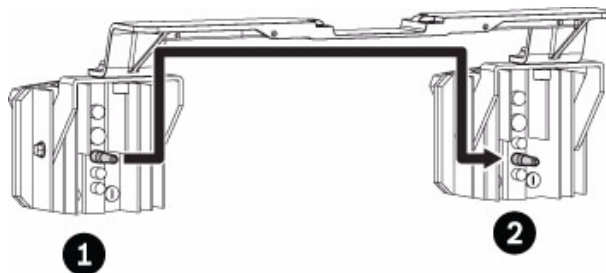


Figure 8.3 Setting the Trip Threshold

Reference #	Description
1	Illuminator 1 - The unit has been set at the factory, so adjustment should not be required. If desired, adjust the sensitivity until the desired night time switching level has been reached.
2	Illuminator 2 - Adjust the sensitivity to the full clock-wise position. The unit will now be OFF when the telemetry input is OPEN (illuminator 1 if OFF), and ON when the telemetry input is CLOSED (illuminator 1 ON).

Table 8.6 Setting the Trip Threshold of the two (2) Illuminators

An External synchronization cable is required, but the SENSITIVITY of the IR illuminators must be adjusted fully clock-wise.

The Dinion camera must be programmed the same no matter which mode of operation is being used. Program the Dinion to respond to the change in state of the HSPS Day/Night relay as follows:

1. Press ON-801-ENTER on the keyboard to display the Dinion Install menu.
2. Use the joystick to highlight the I/O menu, and then press FOCUS.
3. Use the joystick to highlight the ALARM menu, and then press FOCUS.
4. Move the joystick left to change ACTIVE to LOW.
5. Highlight ACTION and change this to MONO.
6. Highlight EXIT and then press FOCUS.
7. Highlight EXIT again and press FOCUS.
8. Highlight EXIT again and press FOCUS.

8.5 Load Default Configuration

DEFAULT VALUES MENU	
1 - LOAD DEF. VALUES?	Y
2 - DELETE ALL PRST?	N
ATTENTION!!!	
RELOAD ALL SETTINGS	
EXCEPT FOR PRESETS	

The **Load Default** menu is used to load the default settings.

DEFAULT VALUES MENU	
1 - LOAD DEF. VALUES?	N
2 - DELETE ALL PRST?	Y
ATTENTION!!!	
CLEAR ONLY THE PRESETS	

Table 8.7 Clear All Presets

8.6 Setup Info Menu

The **Setup Info** menu is used to check the device configuration and the software versions of the UPH boards.

SETUP INFO MENU	
NET board	: MPP board:
ver. BOSCH xx	ver. BOSCH xx
mm/dd/yy	mm/dd/yy
HD r.x	HD r.x
Protocol	: BOSCH
Baudrate	: 38400
Address	: 00001
Enabled RS485	: TX-RX
FWInt xx	FWCam: xx

9 Keyboard Commands List - Bosch

Setup and Configuration

Open OSD configuration: **AUX ON - 200 - Enter**

Dinion^{XF} main menu on: **AUX ON - 46 - Enter**

Dinion^{XF} installation menu on: **AUX ON - 801 - Enter**

Receiver reset/home: **AUX ON - 911 - Enter**

Receiver offset re-calibration: **AUX ON - 204 - Enter**

Auxiliary Connections

Relay number 2 activation: **AUX ON - 65 - Enter**

Relay number 2 de-activation: **AUX OFF - 65 - Enter**

Wiper start: **AUX ON - 202 - Enter**

Wiper stop: **AUX OFF - 202 - Enter**

Washer start: **AUX ON - 201 - Enter**

Presets

Store preset position: **Set Shot - n - Enter** (n = 01 - 99, i.e. 99 presets)

Move to a preset position: **Show Shot - n - Enter** (n = 01 - 99, i.e. 99 presets)

Erase preset position: **Show Shot - 9n - Enter** (n = 01 - 99, e.g. to erase preset position #31, then push **Show Shot - 931 - Enter**)

Standard preset patrol start: **AUX ON - 8 - Enter**

Standard preset patrol stop: **AUX OFF - 8 - Enter**

Recalibrate presets: **AUX ON - 204 - Enter**

Autopan (requires left and right limits to be set in Motion Parameters menu)

Autopan start: **AUX ON - 1 - Enter**

Autopan stop: **AUX OFF - 1 - Enter**

9.1 Keyboard Commands List - Pelco

Setup and Configuration

Open OSD configuration: **95 - PRESET** (press and hold for 2 seconds)

Dinion^{XF} main menu on: **85 - PRESET**

Dinion^{XF} installation menu on: **83 - PRESET**

Receiver reset/home: **94 - PRESET**

Receiver offset re-calibration: **84 - PRESET**

Auxiliary Connections

Relay number 2 activation: **AUX - 3 - ON**

Relay number 2 de-activation: **AUX - 3 - OFF**

Wiper start: **AUX - 1 - ON**

Wiper stop: **AUX - 1 - OFF**

Washer start: **AUX - 2 - ON**

Presets

Store preset position: **n - PRESET** >2 seconds (n = 01 - 99, i.e. 99 presets)

Move to a preset position: **n - PRESET** (n = 01 - 99, i.e. 99 presets)

Erase preset position: **Not available**

Recalibrate presets: **84 - PRESET**

Autopan (requires left and right limits to be set in Motion Parameters menu)

Autopan start: **99 - PRESET**

Autopan stop: **96 - PRESET**

9.2**Changing the Settings**

To change a setting, proceed as follows:

1. **AUX ON - 200 - Enter** to enable the OSD using Bosch protocol (Bilinx or Biphas connection); Pelco protocol (RS485-2 connection) uses 95 - PRESET.
2. Move the cursor to the parameter to be changed.
3. Press the confirmation (**Focus**) button. The field starts flashing, indicating that it is in change mode. Operating the joystick (up and down) shows the alternative choices.
4. After identifying the desired selection, press the confirmation (**Focus**) button; the parameter stops flashing.
5. To go back one menu, press (Iris) button; continue to press (Iris) button to exit the OSD.

9.3**Changing the Numeric Fields**

To change a numeric field, proceed as follows:

1. Use the joystick to scroll to the parameter you would like to edit.
2. Press the confirmation (**Focus**) button. The cursor starts flashing for the character to be changed, indicating it is in edit mode.
 - The minimum and maximum values allowed are displayed at the bottom of the screen. If you try to insert a value outside the limits, the field is forced to the minimum or maximum allowed value.
 - Operating the joystick (up and down) shows the alternative choices. If there is more than one field on the same line, it is necessary to select the field by moving the joystick (left and right).
3. After making the change, press the confirmation (**Focus**) button.
 - The first digit in the numeric field to be changed flashes and the last line of the display shows the accepted limits for the field.
 - Move within the field (left and right) and change the sign or the numeric value (up and down).
4. To go back one menu, press (Iris) button; continue to press (Iris) button to exit the OSD.

10 Maintenance

UPH pan/tilt devices require no particular maintenance.

10.1 Cleaning

To clean the device, use neutral detergent and a non-abrasive cloth.

10.2 Replacing the Fuses



CAUTION!

Replacement of fuses must be carried out by skilled personnel.



CAUTION!

For continued protection against risk of fire, replace, only with same type and rating of fuse.

There are two (2) preset fuses on the connection board. Sizes are related to the power supply voltage, as shown in the table below.

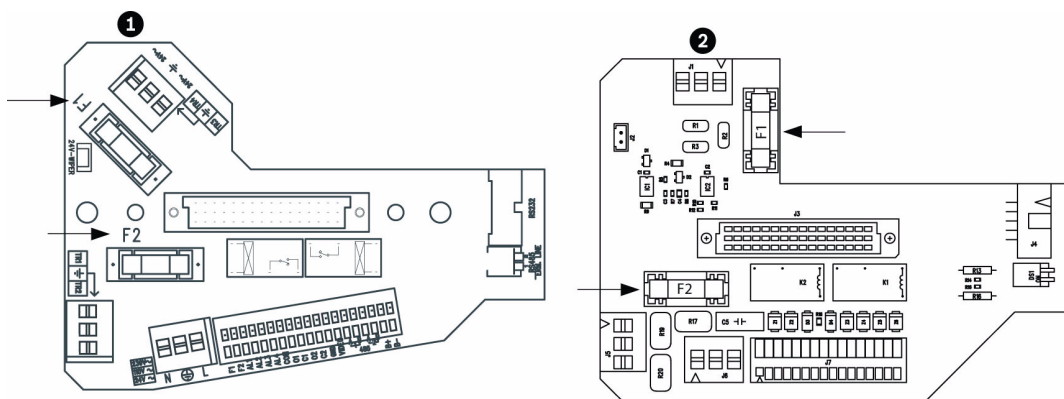


Figure 10.1 Fuses on the Connection Board

Standard Models: Fuse Values for Replacement (Reference #1)

Refer to *Figure 10.1*, Item 1, above for fuse locations.

Voltage	Fuse F1	Fuse F2
24 VAC 50/60 Hz	T 4A L 250 V	T 6.3A H 250 V
120 VAC 50/60 Hz	T 4A L 250 V	T 4A H 250 V
230 VAC 50/60 Hz	T 4A L 250 V	T 2A H 250 V

IR Modes: Fuse Values for Replacement (Reference #2)

Refer to *Figure 10.1*, Item 2, above for fuse locations.

Voltage	Fuse F1	Fuse F2
24 VAC 50/60 Hz	T 4A L 250 V	T 8A H 250 V

11 Troubleshooting

Problem	Possible Cause	Solution
The device is switched off and shows no signs of life.	Incorrect wiring, fuses blown.	Make sure all the connections are correct, check the continuity of the fuses and, if there is a failure, replace them according to the values shown in the table. Note: if the fuses blow repeatedly, contact the authorized service centre.
There is no image on the screen, just a blue screen with the message NO VIDEO SIGNAL!!!	Incorrect camera or module wiring, camera failure.	Make sure all connections are correct for the camera version and motorized lenses.
Presets are not as accurate as they were during installation.	Wind, vibration, and other environmental conditions.	AUX On - 204 - Enter command recalibrates presets; takes 30-45 seconds to complete.
Under particular zoom conditions, the housing or sunshield interferes with the image (only for versions with motorized lens).	The camera is too far behind the glass.	Adjust the camera position by adjusting the slide until the correct position is found.
De-icing counter appears on the screen and user has no control.	It is too cold for the UPH to safely be used.	Wait for de-icing procedure to complete (30-105 minutes).
Data transfer stops.	Power spike/ fluctuation or spurious noise on video/data line.	Reset power on UPH and the unit recovers, although some OSD changes may be lost and need to be re-entered.
The monitor always displays the firmware version with the message, Dip-switch upgrade ON.	Programming dip switch on (up position).	Switch off the pan and tilt, switch off (down position) the "PROGRAM." dip switch (dip-switch number 1 in the Factory Use section) and then switch the device on again.
There is no video.	Wire(s) may be installed incorrectly. Monitor input may be on incorrect setting. The motor may be working improperly.	Re-check all wires and cables to ensure that they are properly secure. Verify that monitor is displaying the correct input setting. Remove power to the unit, re-apply power, and allow the device to go through its homing phase.
Horizontal lines appear on the display	Incorrect dip switch setting	Ensure the dip switch is set to PAL or NTSC as appropriate. Refer to <i>Section 6.5 Biphase/Bilinx Termination, page 36</i>

Note! Over time, due to environmental factors such as wind and vibration, preset positions may not always align with what they were at installation. Use **AUX ON - 204 - Enter** to correct this. It takes 30-45 seconds to cycle through this process, during which time there is no user control. Once it has finished the process and corrected for the effect of any environmental factors, the user regains full control.

11.1 Low and High Temperatures

Systems in the UPH line are switched on by simply connecting the power supply, and switched off by disconnecting the power supply. When the UPH is powered up in an environment below 0 °C, the device checks its internal components to make sure that they are warm enough to start without damage. If the internal components' temperatures are too low, the OSD displays a warning message and the UPH automatically enters its de-icing mode. In de-icing mode the UPH is powered in an attempt to raise its internal temperature. A timer appears on the screen and counts down showing how much time remains for de-icing to complete.



NOTICE!

De-icing can take between 30 and 105 minutes, after which time it is ready for use, assuming that a safe internal temperature is reached; otherwise, it is too cold to safely operate the UPH and it remains off.



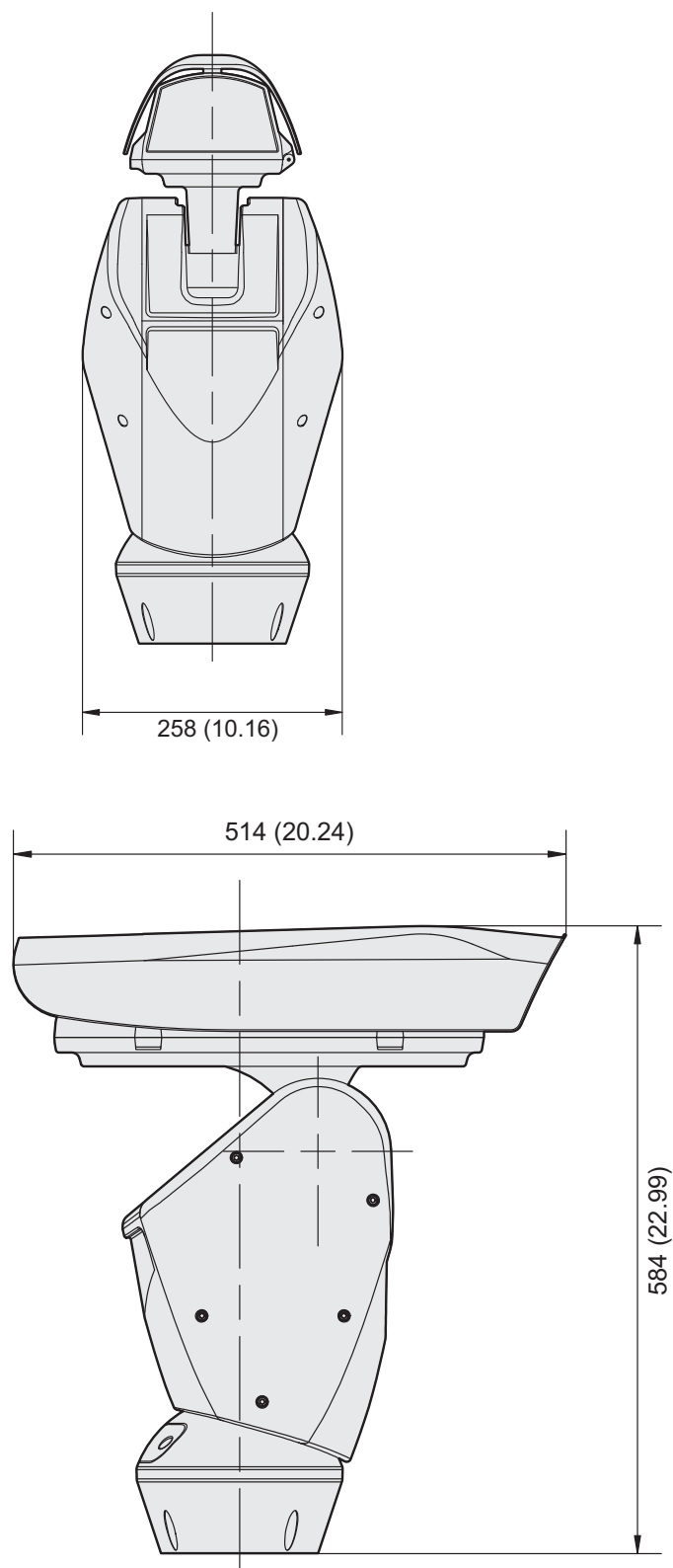
NOTICE!

High temperatures can also have a negative effect on camera image. If the ambient (outside) air temperature exceeds 40 degrees Celsius (104° F), the HSPT will continue to operate; however, some unusual effects may appear on the video signal. These are blemishes that appear as very small white dots on the video picture. They are usually only noticeable during, and a few hours after, dusk, when the overall scene becomes darker, and the housing is still cooling down as the sun goes down.

Continued exposure of the HSPT to excessive ambient (outside) air temperatures will effect the long-term reliability of the HSPT, cause blemishes to become more severe, and may introduce fixed pattern noise (FPN) on the video signal.

Solution: via Bilinx change the SensUp setting in the camera to OFF; this reduces the number and intensity of the blemishes.

11.2 Dimensions and Range of Movement



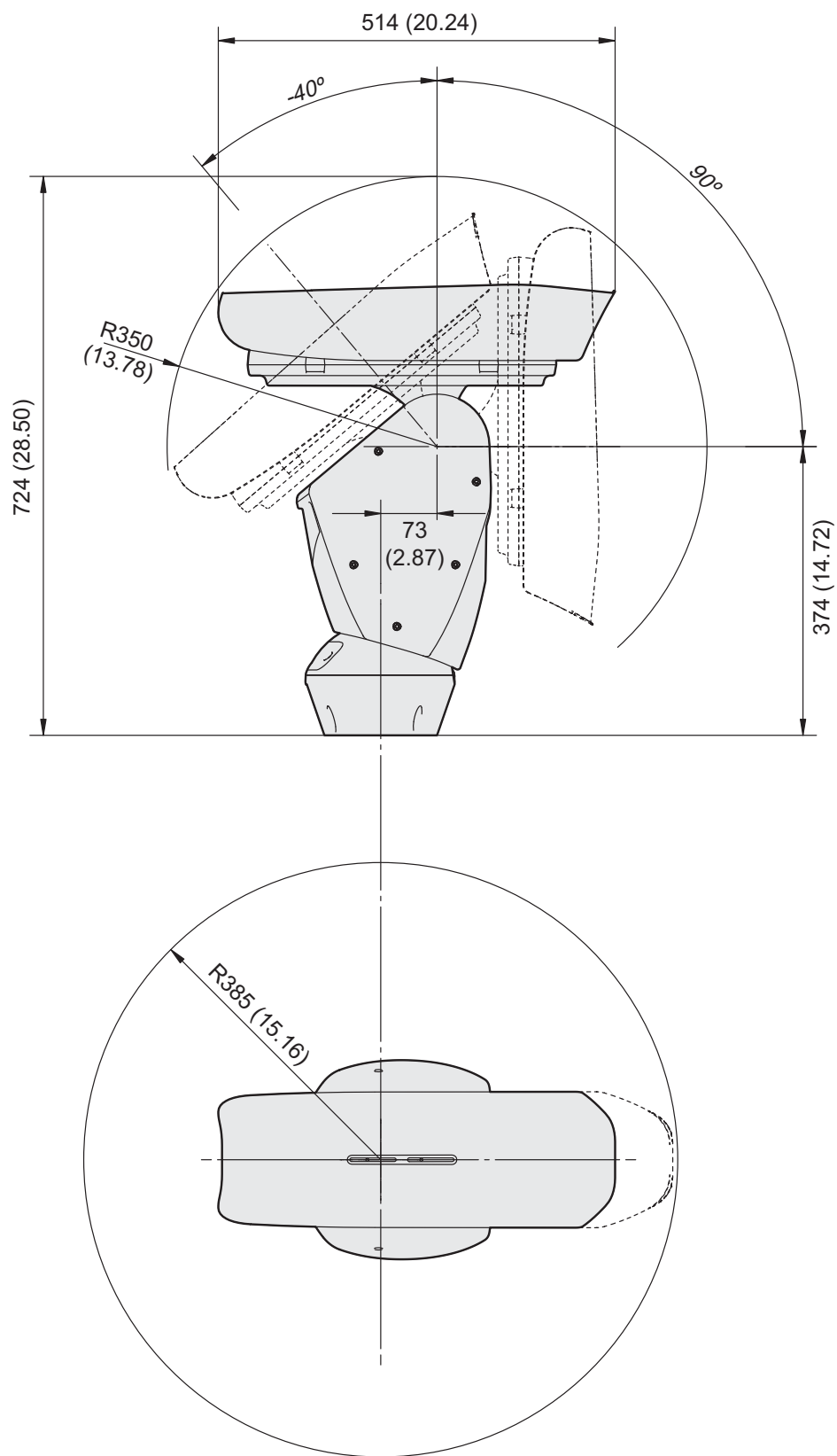


Figure 11.1 Dimensions and Range of Movement

12

Appendix A: Wiring Summary

Standard	
Reference	Description
F1	Feed 1, 24 VAC for optional washer
F2	Feed 2, 24 VAC for optional washer
AL1	Alarm 1 Input; triggered by external DC voltage
AL2	Alarm 2 Input; triggered by external DC voltage
AL3	Alarm 3 Input; triggered by external DC voltage
AL4	Alarm 4 Input; triggered by external DC voltage
Com	Alarm Common (ground)
O1	Output 1; Normally Open; Dry contact relay output
C1	Common 1; common for Output 1
O2	Output 2; Normally Open; Dry contact relay output
C2	Common 2; common for Output 2
GND	Video ground, black cable from coaxial termination cable
VIDEO	Video output, clear cable from coaxial termination cable (BILINX protocol)
RS-485-1	Pelco D Protocol 300 to 19200 Baud 8 N 1 Tx channel
A	Data (connect to Pelco controller input Rx +)
B	Data (connect to Pelco controller input Rx -)
RS-485-2	Pelco D protocol, 300 to 19200 Baud 8 N 1 Rx channel
A	Data (connect to Pelco controller output TX +)
B	Data (connect to Pelco controller output TX -)
B+	Biphase + (OSRD protocol)
B-	Biphase - (OSRD protocol)

IR	
Reference	Description
F1	Feed 1, 24 VAC for optional washer
F2	Feed 2, 24 VAC for optional washer
AL1	Alarm 1 Input; triggered by external DC voltage
AL2	Alarm 2 Input; triggered by external DC voltage
LNO	External IR Probe, Normally Open Contact
AGND	Alarm Ground & External IR probe common
O1	Output 1; Normally Open; Dry contact relay output
C1	Common 1; common for Output 1
GND	Video ground, black cable from coaxial termination cable
VIDEO	Video output, clear cable from coaxial termination cable (BILINX protocol)
RS-485-1	Pelco D Protocol 300 to 19200 Baud 8 N 1 Tx channel
A	Data (connect to Pelco controller input Rx +)
B	Data (connect to Pelco controller input Rx -)
RS-485-2	Pelco D protocol, 300 to 19200 Baud 8 N 1 Rx channel
A	Data (connect to Pelco controller output TX +)
B	Data (connect to Pelco controller output TX -)
B+	Biphase + (OSRD protocol)
B-	Biphase - (OSRD protocol)

13

Appendix B: Connecting the Pump



WARNING!

The connections illustrated below should be made only and exclusively by skilled operatives who should comply scrupulously with all the wiring and power supply instructions. Failure to do so could create serious risks for the operator and would invalidate the guarantee.

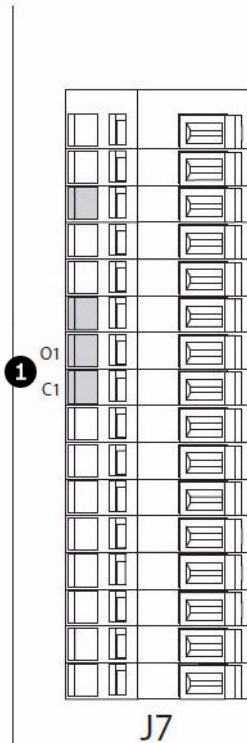


Figure 13.1 J7 connector on the base board of the pan and tilt. All models have this function.

Reference #	Description
1	Activation pump contact. O1 - C1: Clean contact output for starting the water pump (max. 50 VDC/30 VAC, 1 A).

13.1

Connecting a Washer System in the HAC-WAS05-20

For the connections, see the product installation handbook.

Bosch Security Systems, Inc.

850 Greenfield Road
Lancaster, PA 17601
U.S.A.

www.boschsecurity.com

© Bosch Security Systems, Inc., 2012